WOMAN'S SECRETS

ROYAL A. McCLURE, M. D.
SEATTLE, WASHINGTON

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WOMAN'S SECRETS

A BOOK FOR A WOMAN'S PRIVATE STUDY

INTENDED FOR THE

WIFE, DAUGHTER, MOTHER

AND NURSE

BY

ROYAL ALFRED McCLURE, M. D.

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DEDICATION

This book is dedicated to my daughter

Grace Hannah McClure

The Author

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BUTLER
Love and Its Affinities

HART
Woman and the Race

NORTON
Genito-Urinary Diseases and Syphilis

PREFACE

I have endeavored to make this book plain and practical for the daughter, wife, mother and nurse. As often as possible I have dispensed with medical terms; as, in my judgment, a plain unified discourse written in simple language will make the varied themes more clearly understood by the laity. My aim has been to write a book that will act strictly as a teacher, and instruct the reader in that science which is devoted to the regenerative organs. I have tried to express myself on every subject so that each one will be of practical benefit. I have given sufficient technique to meet the requirements and no more. The limits and nature of the book do not allow any lengthy details. All late literature has been consulted.

The book has been divided into thirty chapters, and my chief object has been to select topics that will lead to a better comprehension of those subjects upon which every woman should be thoroughly informed.

I am indebted to my many friends and colleagues who have criticised and made many valuable suggestions, thereby assisting me greatly in the preparation of this volume.

The illustrations have been carefully selected from our best medical literature in order to make clear the

subjects under consideration, and I wish here to express my hearty thanks to the authors and publishers of the works so used.

To the artist, Charles S. Russell, I am under obligations for faithful and efficient work in the preparation of some of the illustrations.

ROYAL ALFRED McCLURE, M. D.

813 Second Avenue,
Seattle, Wash.

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INTRODUCTION

"As upon the stainless skies
Peaceful hangs the new born sun;
So upon thy bosom lies,
Mother pure thy holy one.
Ah, how lovely that repose
Mother with the infant fair—
Twined, as with the tender rose,
Modesty, grace and sweetness are."

To the Mother:

This volume has a definite purpose—to instruct you upon matters of vital importance that you may in turn instruct your daughter. If, perchance, you are timid about such things, as so many are, then let her study well its contents. You sacrifice much to educate her in music, art, and science. You give little thought to that knowledge which is of far greater moment to her. You keep her ignorant of self—that she may learn, oft-times, by sad experience. It is in your hands to save her remorse and suffering. Teach her, I beg you, how to protect her virtue and her health.

My dear mother, when your child comes to you for the first time asking you for a sacred truth concerning the mysteries of life, do not evade her questions. What do you say to your daughter? What do you hope for

her future? What can you hope if you give her answers like these, "Never mind, you will learn it all some day." "Foolish child, you must not talk about such things until after you are married," "Why do you ask such questions? How disgraceful! Never mention it again," "That's nothing; you will learn it soon enough." Are you one of those mothers who says to her medical adviser, "Oh, there are certain things I cannot tell my daughter. I prefer to let her find out such things the best way she can"? What a pity! How I shudder at such a remark, for I know too well what it means to that child.

Mother, do not let your young daughter obtain information upon this topic from older associates or strangers. Your duty as a Christian demands that you put forth your best efforts to train your children wisely and well. It is necessary that they have a knowledge of self and sex, and I want you to impart that knowledge with entire frankness. Will you allow your daughter to go into the world, her mind dazed with a wondering curiosity which must in some way be satisfied? She may make a mistake which may bring unhappiness, perhaps disgrace, upon you. Would you turn your child out and censure her severely because you have not been a real mother? I beg of you not to wait until she has reached the age of twenty before you talk to her. It is her right to know herself and it is your duty to inform

her while she is young, tender and easy to teach and guide. Take time to enjoy your daughter's girlhood. Be her chum. Have her confidence and do not let her tell her secrets to her sympathetic friends instead of coming to you.

You may think I am wrong when I insist that mothers should be explicit with their daughters upon the mysteries of life. You are not called upon to witness, as are men of the medical profession, the untold suffering which is the frequent and appalling result of false modesty and ignorance. It is true that a feeling of responsibility comes over me when I endeavor to place before you in simple language these chapters which deal with the relations that exist between human beings and the laws that govern all mankind. The importance of and demand for a work of this character cannot be questioned. It has been my aim to select subjects which, studied collectively, will give the product of knowledge gleaned from the fields of our best medical authorities. I trust nothing has been omitted which will give a clear understanding of "Woman's Secrets" to the mother, daughter, wife, and nurse.

In the name of true womanhood I beseech you to study this matter earnestly. Regard this volume as a reproach, not upon you, but rather upon the false system of educating girls as to self, life, and sex. I cannot find

words to express the great necessity for the enlightenment of our young women. Years of experience as a physician tell me how much needed is a change from silence and ignorance to plain-speaking and knowledge. Find the faith and courage to impart, as only a mother can, that knowledge to your child. When she goes from you to her husband let her take with her a gift of immeasurable value, a book whose chapter on "Marriage" may save the happiness of her and hers. Make of your child a woman who knows her rights and duties as a wife and mother. If you succeed you will have laid the foundation of a happy home, and future generations will call you blessed.

CHAPTER I.

ANATOMY AND PHYSIOLOGY OF THE FEMALE PELVIC ORGANS.

A knowledge of the location and physiology of the female pelvic organs is an essential foundation to a further knowledge of life and sex. We have striven to eliminate, in this discussion, many tiresome details relating to the anatomy of the parts, and have used cuts to give a clearer comprehension of the reading matter. A careful study of each illustration will be of immense value to the woman who desires an easy method of obtaining necessary information.

We have for consideration the external and internal genitals.

The external genitals are the organs of copulation, while the internal are the reproductive organs. The Mons Veneris, Vulva, and Vagina form the first group; the Uterus (womb), Fallopian tubes and Ovaries form the second.

THE EXTERNAL GENITALS.

First Group.

MONS VENERIS.

The Mons Veneris is the only part of the genitals which can be seen when a woman stands erect. It is

located at the lowest part of the abdomen, and is covered with coarse hair. On men the hair extends up on the

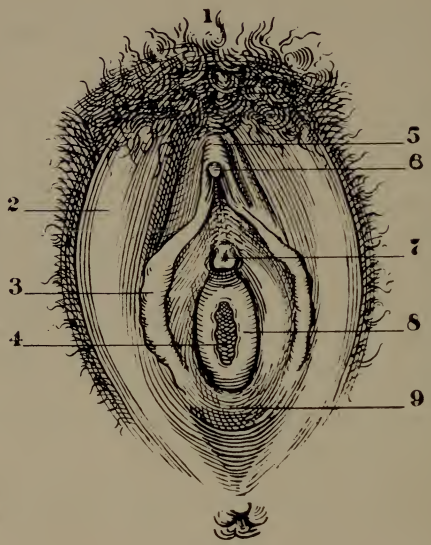


Fig. 1—1, Mons veneris. 2, Large lips. 3, Small lips. 4, Opening into the vagina. 5. Prepuce (covering of clitoris). 6. Clitoris. 7. Meatus (opening into bladder). 8, The hymen. 9, The point of union of the large lips. This is where the tear occurs during childbirth.

abdomen; on women it is confined to a straight or curved line at the upper border of mons veneris. See Fig. 1-1.

The growth of hair begins at puberty, and it is usually curly and darker than that of the head.

VULVA.

The Vulva forms and surrounds the entrance to the

genital canal. It is composed of several parts (See Fig. 1). Those for special consideration are the large and small lips, the clitoris, and the hymen.

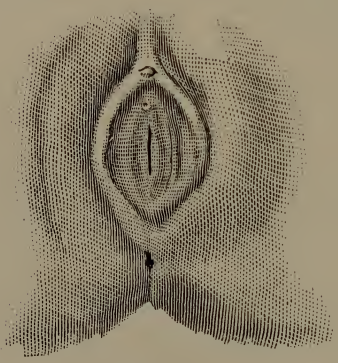
The Large Lips (labia majora), Fig. 1-2, are prominent ridges located on each side of the opening, practically a continuation of the mons veneris. The outer surface is darker than the rest of the skin and is covered with hair which is a continuation of that on the mons veneris. The inner surface is of a rose color and has a sparse down scattered over it. The lips unite in the center just above the clitoris, Fig. 1-6, where they are thick, but as they pass along the sides of the opening towards the back they become very thin and are frequently torn at childbirth. Fig. 1-9.

The Small Lips (labia minora), Fig. 1-3, are two small folds of skin which lie just inside the large lips. In front they divide into two layers, an upper and lower; the upper forms the prepuce, Fig. 1-5, a covering for the clitoris, but is not attached to it. The lower layer passes under the clitoris and is fastened to its under surface. In some women the small lips extend as far back as the large lips, and in this way form a ring inside the large lips; in other cases they extend back only half way. The small lips have no hair on their surface, nor are they composed of fat like the large lips.

The Clitoris, Fig. 1-6, corresponds to the penis in

the man, but differs very much in structure. It is about an inch long and extends backwards, is divided into two parts near its center, and each part is attached to the bone which is located just under the mons veneris. Only a very small part can be seen as it is covered by the small lips, and in many women this covering must be pulled back before it is at all visible. It is very rich in nerve supply of a peculiar sensitive kind, and, therefore, the clitoris is the chief seat of sexual excitement in women, and is often the object of masturbation.

The Hymen, Fig. 1-8, is a fold of tissue that more or less completely closes the opening into the vagina.



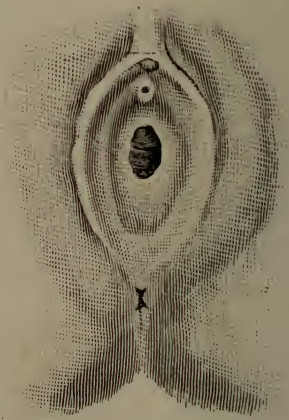
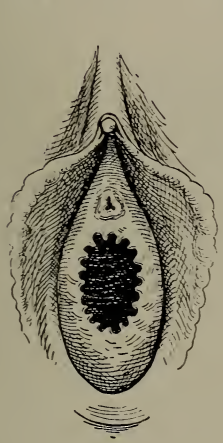


Fig. 2—Showing the common form of hymen, a simple linear. (Garrigues Diseases of Women.)
Fig. 3—Showing the hymen in the form of a ring. (Garrigues Diseases of Women.)

It presents marked differences in shape and consistence. The most common forms are shown in Figs. 2 and 3.

As a rule it ruptures very easily at the first successful connection, into two or three flaps, as illustrated in Fig. 6. Considerable resistance is felt and pain is produced by the examining finger in a case where the hymen is not ruptured. In some cases it may be so dense that copulation cannot take place until after a surgical operation; especially is this true in the imperforated form, Fig. 5. The membrane may be destroyed in early childhood by masturbation, for the sake of cleanliness, or by a careless examination. Connection may occur several times



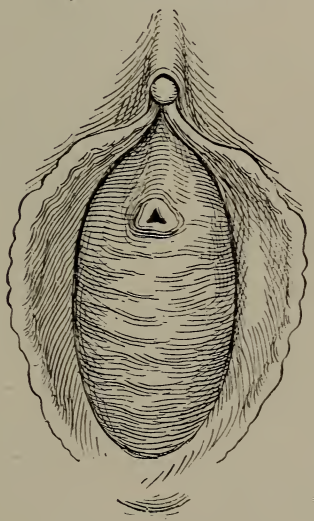


Fig. 4—Showing hymen with the edges of the ring indented. (Ashton Practice of Gynecology.)
Fig. 5—Showing imperforated form of hymen. (Ashton Practice of Gynecology.)

without injuring the hymen. Occasionaly it remains intact during childbirth, Fig. 4.

VAGINA.

The Vagina, Figs. 7 and 15, is a tube-like canal which extends from the vulva to the uterus. It is located be-

Fig. 6—Normal injury during sexual intercourse. (Williams' Obstetrics.)

tween the bladder and rectum. The upper part near the uterus is easily dilated by air or water into the shape of a funnel, as illustrated in Chapter XV. Its normal form is that of the letter H. The front and back walls come together in the center, and the side wall is folded against itself, as illustrated in Fig. 8.

The size and length of the vagina vary in different women and under different conditions. In the virgin the front wall is about two inches long, while the back wall is about two and one-half inches. Sexual inter-

course and childbirth greatly increase these dimensions.

The upper part of the vagina is completely closed; the walls are attached to the uterus, and the cervix (the neck of the uterus), projects into the pocket thus formed.

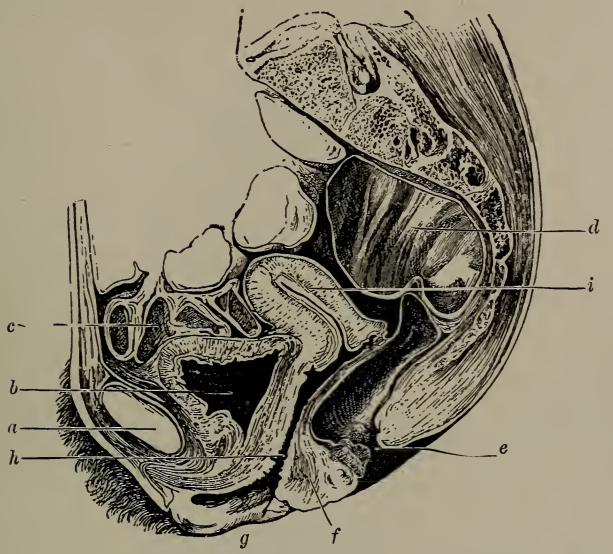


Fig .7—Scheme to show the vagina and other pelvic organs. a, pelvic bone just under the mons veneris. b, Bladder. c, Small intestines. d, Large intestines. e, Rectum. f, The muscles between vagina and rectum. g, Vulva. h, Vagina. i, Uterus. (Garrigues Diseases of Women.)

The vagina has three important functions:

1. It serves as an outlet for the menstrual flow and other discharges from the uterus.

2. It is the female organ of copulation.

3. It forms part of the birth-canal and helps move the child forward during labor.

The normal secretions of the vagina prevent infection by destroying some forms of bacteria that in various ways find entrance into the vagina. The walls of the vagina are kept moist by a small amount of secretion from the uterus. On each side of the opening of the

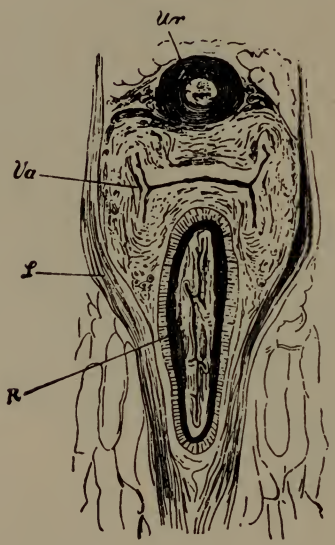


Fig. 8—Showing cross section of the vagina. va, Vagina. ur, Urethra. r, Rectum. f, Muscle around the vagina and rectum. (Garrigues Diseases of Women.)

vagina near its juncture with the hymen, is located the so-called Vulvo-vaginal Gland, Fig. 9. A duct leading from the gland opens into the vagina just in front of the hymen. It secretes a fluid that keeps the vulva moist and acts as a lubricant during sexual excitement. If the opening to the gland becomes closed on account of

any inflammation, or if any infection like gonorrhoea gets into the gland, an abscess is formed, Fig. 10. A bruise will cause the same condition. These labia ab-

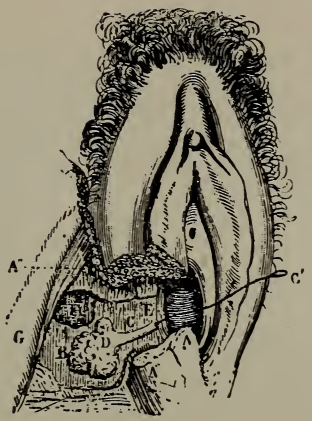


Fig. 9—The vulvo-vaginal gland. A. A. A., The large and small lips cut through and separated. G, Muscle retracted to show gland. B. D., Gland. C, Duct leading from gland to vagina. C', Opening. E, Muscle that is under the gland and around the vagina. (Garrigues Diseases of Women.)

scesses are very common and cause severe pain during their formation. After the gland is once infected it should be removed by surgical operation, as simply lancing the abscess after once formed rarely results in a permanent cure.

THE INTERNAL GENITALS.

Second Group.

THE UTERUS.

The Uterus, Fig. 11, is a muscular structure located in the lower part of the pelvis between the bladder and

the rectum; it is below the abdominal cavity and above the vagina. It resembles a flattened pear in shape: the small end points downward into the vagina; the larger

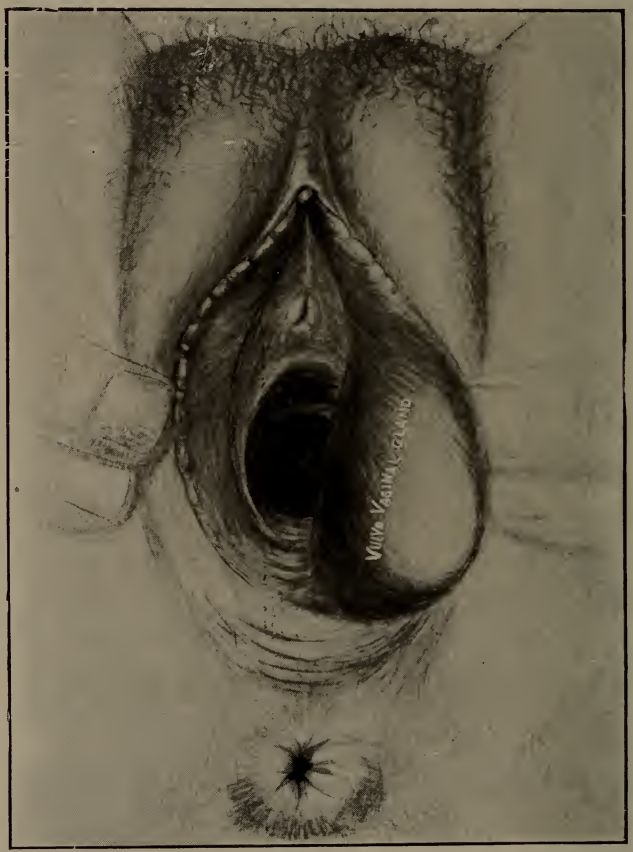


Fig .10—A vulvo-vaginal abscess of the gland ready for operation. (Gilliam Text Book of Practical Gynecology, F. A. Davis Co., Copyright.)

flat portion extends upwards into the pelvis. It consists of a body and cervix.

The Body of the uterus contains a cavity, Fig. 11-3, which serves as a receptacle for the product of conception. The muscles of the uterus contract during labor and expel the child through the vagina. At the upper and outer angle of the body the Fallopian tubes form a communication between the uterine and abdominal cavities, Fig. 11-7.

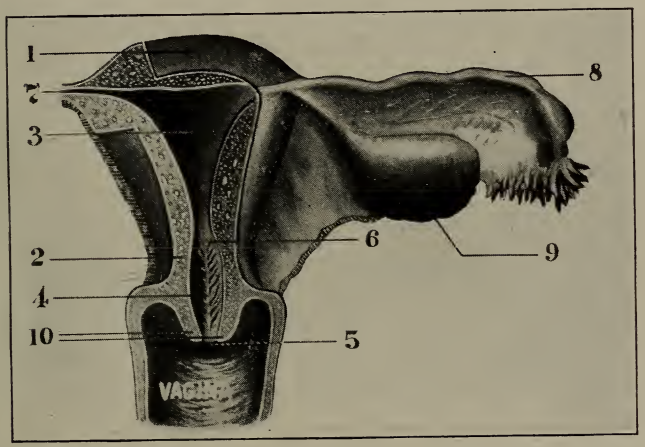


Fig. 11—1, Body of the uterus, sometimes called fundus. 2, Cervix, 3, Cavity of uterus. 4, Canal in cervix. 5, External opening. 6, Internal opening. 7, Opening into the tube. 8, Fallopian tube. 9, Ovary. 10, Showing the part of the cervix that extends into the vagina (front view),

The uterus is also the organ of menstruation. It is much larger in some women than in others, especially if a woman has had children. In a virgin the average depth of the cavity, including the canal in the cervix, is about

two inches. Sexual intercourse and childbirth increase its depth until it measures from two and three-fourths to three inches. It is broadest on a level with the Fallopian tubes and varies in measurement from one and one-fourth to two inches. The average thickness is one

Fig. 12—Normal position of the uterus. (Gilliam Practical Gynecology—Copyright F. A. Davis Co.)

inch. When the uterus is in its normal position the body is bent forward resting on the bladder and the cervix points toward the spine, Fig. 12. The uterus is not fixed in its position: a full bladder will push it back; a full rectum will crowd it forward, but when these are empty it goes back to its normal place. When a patient

lies down on the back the uterus falls back more or less toward the rectum. There are four sub-divided ligaments,

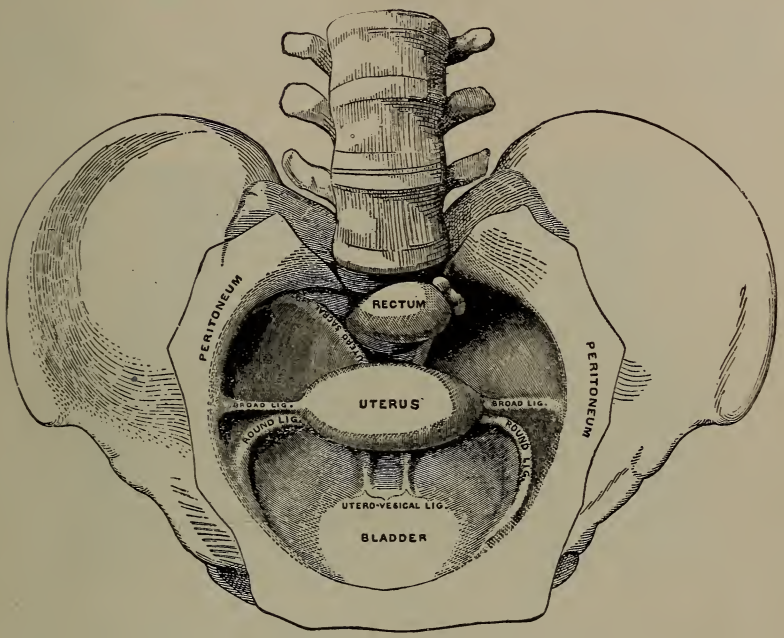


Fig. 13—Showing the ligaments of the uterus and how they are attached to the bones of the pelvis. (Garrigues Diseases of Women.)

the broad, round, utero-vesical, utero-sacral, that extend from the uterus to the pelvic bones. Figs. 13 and 14.

The Broad Ligaments, Figs. 13 and 14, are two wide folds of tissue, fan-like in appearance, situated between the sides of the uterus and the pelvic wall. The inner edge is attached to the sides of the uterus; the outer and

lower border, to the bones on the inside of the pelvis. The Fallopian tube is attached to the upper border near the uterus; the outer part of the upper border being free, Fig. 19-6. The broad ligaments divide the pelvic cavity into a front and back part, the bladder being in the an-

Fig. 14—Showing the pelvic organs and their relation to each other, (front). This illustrates the round and broad ligaments. The bladder is distended, and the ovaries are drawn up into view.

terior part, Fig. 14, and the rectum in the posterior part, Fig. 13.

The Round Ligaments are fastened to the uterus just below the Fallopian tube. They lie between the folds of the broad ligament and pass upward and outward to a ring called the inguinal canal (this is the point where rupture often occurs). They pass through the opening

and are finally lost in the large lip of the vulva, as shown in Figs. 13 and 14.

The Utero-Vesical Ligaments are two small folds of tissue that pass from the bladder to the uterus. They are attached to the uterus on a level with the internal opening, Fig. 13.

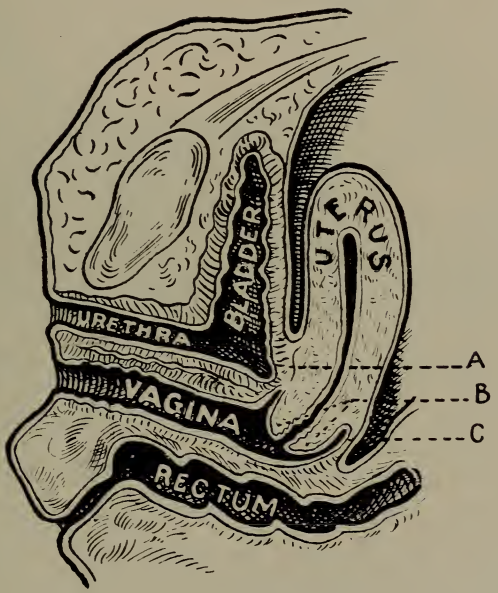


Fig. 15—A, C, Shows how the vaginal wall is attached to the cervix. B, Is that part of the cervix that extends into the vagina, (side view).

The Utero-Sacral ligaments are large folds of tissue attached to the back part of the uterus on a level with the internal opening, and from there they extend to the back

part of the pelvis, where they are attached to the bones. They form with the upper vaginal wall an elastic band on which the uterus is suspended. These ligaments keep the uterus from coming down to and beyond the vaginal outlet, Fig. 13.

The Cervix (often called the neck of the womb, Fig. 11-2), is the small part of the uterus which extends from the external to the internal opening, Fig. 11-5-6. It has

Fig. 16—Showing normal cervix. (Williams' Obstetrics.)

a canal in its center, Fig. 11-4. The vagina is attached to the cervix on all sides at about its center, that is half way between the external and internal openings. The lower half extends into the vagina, Fig. 11-10 and Fig. 15-B, and feels like the small end of a pear with the stem removed. The normal cervix is hard, round and smooth, Fig. 16. The frequent tearing of the cervix at childbirth, Fig. 17, causes a great deal of reflex nervous trouble and should be repaired by a surgical operation, Fig. 18. The tears may occur in any direction, but are generally

on the left side. Both sides may be torn and in that case the tear is more severe on the left side. Women are very careless about a laceration of the cervix, as no symptoms are apparent at the time it takes place. All

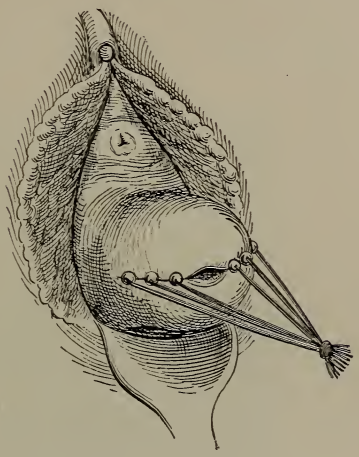


Fig. 17—Showing cervix torn at childbirth. The uterus is pulled down to vaginal outlet to show cervix. (Ashton's Practice of Gynecology.)

Fig. 18—Showing how the cervix looks after operation. (Ashton's practice of Gynecology.)

the evil effects come on very gradually; the health of the patient becomes impaired. A full explanation of this condition is given in Chapter X, "Woman and Her Ailments."

THE FALLOPIAN TUBES.

The Fallopian Tubes are long, round tubes extending

from the corner of the uterus, along the upper border of the broad ligament to the ovaries, Fig. 19. They are hard next to the uterus, and about the size of an ordinary slate pencil: the outer half of the tube is larger, about the size of a lead pencil. The opening near the ovary is of a funnel shape and is very uneven, has numerous little frills extending in every direction, Fig. 19-3 and Fig. 20. The tubes are from three to four inches long, and are more or less curved. The canal in the center is

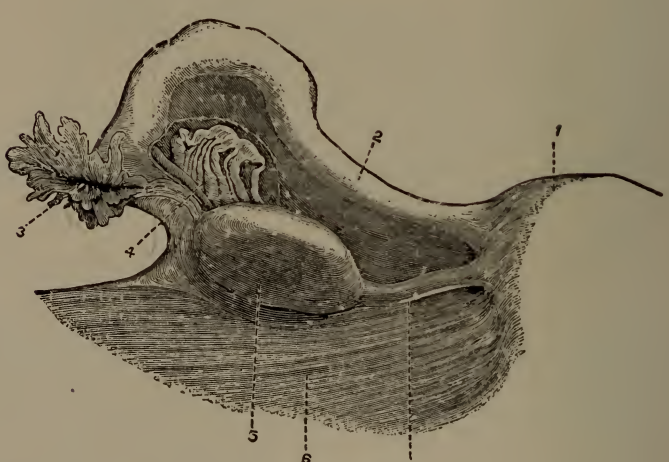


Fig. 19—Showing back view of the left tube and ovary. 1, Uterus. 2, Fallopian tube. 3, Outer opening of tube near ovary. 5, Ovary. 6, Broad ligament. 7, Ovarian ligament. (Garrigues Diseases of Women.)

very small and uneven, as the lining membrane is arranged in folds, Fig. 21. The tubes, at the monthly period, have a movement similar to that of the intestines

and this assists in carrying the ova to the uterus. During this activity the lining membrane of the tubes secretes a fluid from the blood and as the fluid is forced to flow into the uterus by the motion of the tubes, it carries with it the impregnated ovum. If the fertilized ovum should become lodged in the tubes by a diseased or abnormal condition of the tube, as is often the case, pregnancy then

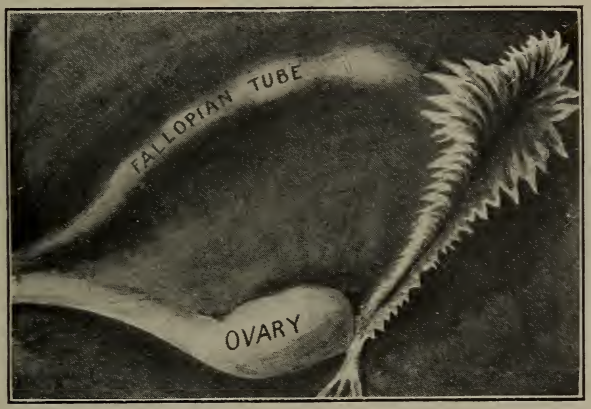


Fig. 20—Showing the outer opening of the tube on the stretch. Notice how the frills extend to the ovary.

takes place in the tube instead of the uterus. This is more fully considered in Chapters IV and V, Conception and Tubal Pregnancy.

THE OVARIES.

The Ovaries are two oval shaped bodies that lie at the sides of the uterus. You will notice they are below

the Fallopian tubes, Fig. 22. They are attached to the back of the broad ligament in about its center. Generally speaking, the ovaries hang free in the abdominal cavity, fastened at each end and on one side. They are about one and one-half inches long, one inch wide, and one-half of an inch thick. The inner end is thinner than the outer

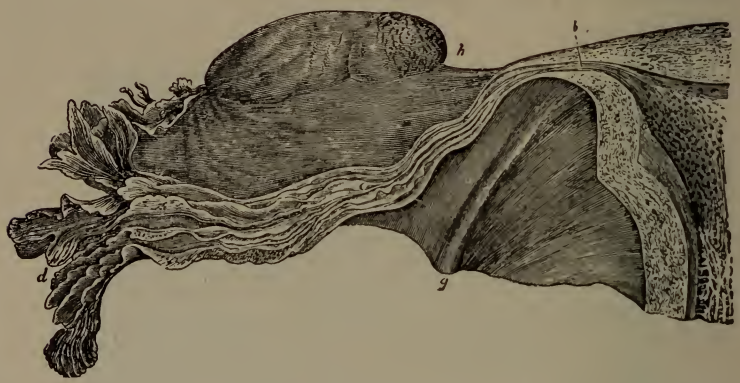


Fig. 21—Showing the right fallopian tube laid open. ab, Uterine portion of tube. cd, Folds of the lining membrane. g, Round ligament. h, Ovary. (Garrigues Diseases of Women.)

and is attached to the corner of the uterus by a cord-like band, called the ovarian ligament, Fig. 22 LO. This ligament is fastened to the side of the uterus just under the tube, the outer end being broad is fastened to that part of the broad ligament near the outer end of the tube. The front surface of the ovary is almost flat and quite dense in structure, being closely united with and attached to the broad ligament.

The part that extends out backwards is even, smooth,

velvety and of a pearl-grey color. This is the condition in a young girl, late in life it becomes hard and irregular; depressions form on the surface, Fig. 23, and after the menopause it shrinks until it is very small, and finally is no larger than a pea. The ovaries are near the rectum and are surrounded by coils of the small intestines. The ovaries have a very rich blood and

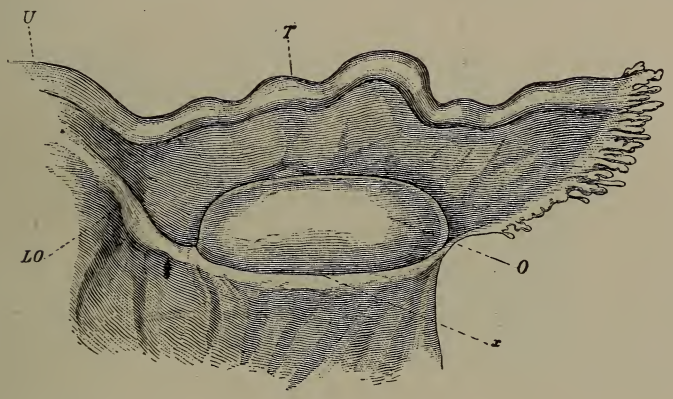


Fig. 22—Right ovary and tube of young girl, age 16, seen from behind. U T, Tube. O, Ovary. L O, Ovarian ligament. Note how smooth surface of the ovary. (Garrigues Diseases of Women.)

nerve supply. Their function is to develop and expel the ova by the formation and rupture of Graafian follicles. The body of the ovary is composed of two parts, the inner and the outer. The outer part varies in thickness according to the age of the woman. It becomes thinner with advancing years. Fig. 24 illustrates the inner and outer part; the ovary in this case is cut lengthwise. Fig.

25 gives another illustration of an ovary, showing the outer part with a recent rupture of the follicles, and many little cavities filled with a fluid; in this fluid is a little cell called the ovum, Fig. 27. These little cavities are called Graafian follicles, Fig. 26; there is a little center in the ovum that has been named the germinal vesicle. It

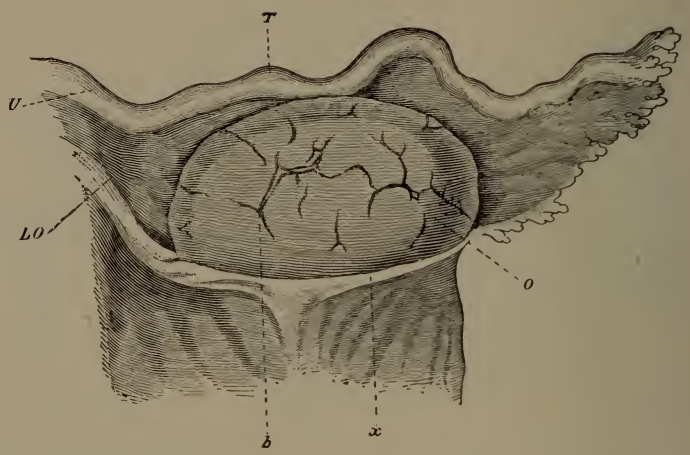
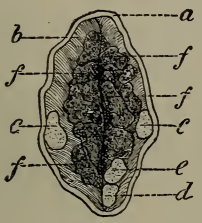


Fig. 23—Tube and ovary of a girl 24 years old, seen from behind. Showing the depressions (scar tissue) on the ovary caused by rupture of the Graafian follicles. U T. Tube. L O, Ovarian ligament, b, Where the follicles have ruptured.

contains a still smaller cell called the germinal spot, Fig. 27. Sometimes two or three germinal vesicles are in an ovum; when this is the case twins or triplets are often born. The germinal vesicle and germinal spot is the part from the ovum which unites with the spermatazoon and causes conception to take place. The Graafian fol-

licles are separated from each other by thin layers of tissue. The follicles begin to develop from birth, but do not reach the surface of the ovary until after puberty.

Nature has ordained that these Graafian follicles enlarge and undergo marked changes. They approach the surface of the ovary while at the same time the ovum goes through certain changes. This stage of development goes on until the walls of the follicles on the sur-



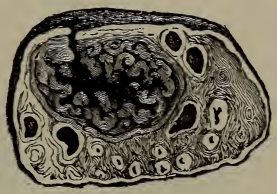


Fig. 24—Showing inner and outer part of ovary. c, e, d, Graafian follicles situated in outer part. d, Outer part. f, Inner part. a, External covering. (Garrigues Diseases of Women.)
Fig. 25—Showing ovary of a woman with a collapsed graafian follicle fifteen days after menstruation. Also other small follicles filled with fluid that contain ova. (Garrigues Diseases of Women.)

face of the ovary become very thin; and then, as ovulation causes the ovary to become congested, the increased blood pressure causes the Graafian follicle to rupture, Fig. 28, and the ovum escapes into the abdominal cavity, or it passes into the tube so that conception may take place. The number of ova produced in both ovaries is enormous, —about 72,000 during the average menstrual life.

When the Graafian follicles rupture, the ovum and the fluid which is in the follicle escape and the empty

follicle collapses, Fig. 25, and in a short time the cavity is filled with blood.

The walls of the cavity begin to grow and fill up the space, crowding the blood clot to the center. In healthy young girls this is all absorbed and new tissue similar in structure to that of the ovary is formed.

In older women where the circulation in the ovary is

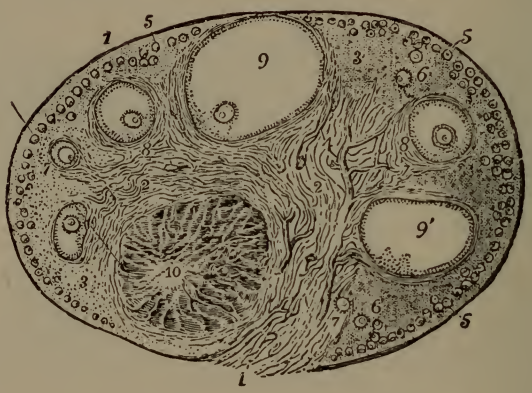


Fig. 26—Cross section of outer part of ovary to show the graafian follicles. 5, Illustrates follicles in their early stages. 6, 7, 8, More advanced. 9, Almost matured follicle. 9', A follicle in which no ova has developed. (Garrigues Diseases of Women.)

not good, this absorption does not take place until a change occurs in the tissues which fill up the cavity. When this change takes place absorption occurs the same as in a young girl.

There is no Graafian follicle formed while the woman is pregnant or after the menopause. The maturing and rupturing of a Graafian follicle and the escape of the ova

is called ovulation, and just what relation exists between menstruation and ovulation is not fully known. Is ovulation a continuous process or does it occur at reg-

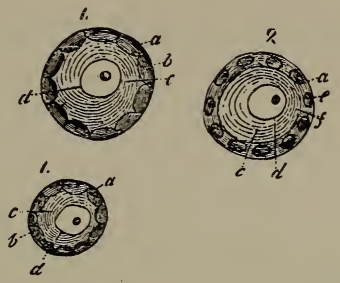


Fig. 27—Showing three separate graafian follicles with ova in center, with germinal vesicle and germinal spot. The circular lines c in 2 represents the fluid. The clear spot in each the ova. The small dark spot the germinal vesicle, and the little white speck in the germinal vesicle in No. 1 the germinal spot. (Garrigues Diseases of Women.)

ular periods, and if so, does it occur at the same time that menstruation takes place? We can best answer these questions, not by giving various theories that have

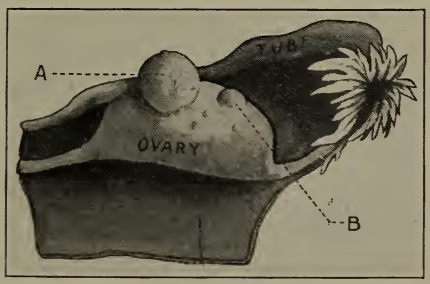


Fig. 28—A, Showing a graafian follicle ready to rupture. B, Graafian follicle developing.

been advanced by the medical profession, but by recording the following facts:

1. Conception has occurred while child is nursing —also after the change of life.

2. Young girls have become pregnant before they menstruated.

3. Women have been known to menstruate only when they are pregnant.

4. Conception may take place at any time during the month, but it is most likely to occur just before or after menstruation.

CHAPTER II.

PUBERTY.

Definition:—Puberty is the change from girlhood to womanhood. A development of the sexual organs is caused by the influence of the nerves connecting the brain with the genital organs and the result is a wonderful maturing of the system. The physical change is gradual. The breasts become larger; the hips, broader; the whole body takes on a rounded and shapely form and is gracefully molded; hair grows on the external genitals; the uterus enlarges; menstruation begins; the attraction between the sexes becomes for the first time apparent.

General Consideration.

Marked changes take place at puberty. The feeling of sentimental life is present. New, beautiful pictures are revealed to the mind, and have, under favorable circumstances, become a source of rich mental development. In the words of Parvin, "The girl passing into womanhood puts away childish things, turns from frivolous amusements, from the toys and plays, or from the rude sports in which she has found pleasure. She enters a new life, has new thoughts, desires, and emotions; hitherto she has been living solely in and for the present, but

now the future with its lights and shadows, its hopes and fears, makes a large part of her life. She is more sensitive and reserved, manifests a modest dignity, giving and expecting respect, her individuality becomes more apparent, her sense of duty stronger and her ambition greater."

A woman is not fully developed until she is twenty. True, she can become pregnant as soon as she menstruates, but that is no reason why she should marry and become a mother. Garrigues says, "Statistics show that the women who marry under twenty years of age die very young. It is acting against nature's laws that women should become mothers before they are full-grown. The uterus should attain its full size, the breasts should be fit for nursing, the pelvis should be of sufficient size to allow the passage of a full-grown child, the muscles of the uterus should have the strength to propel it, and the whole system should have full power of resistance and endurance. It may, therefore, be stated that most women should not marry before they are twenty years old."

Early maternity makes pregnancy dangerous and complicates labor. It also has injurious effects upon the child which may be poorly developed and often dies soon after birth. Mothers should teach their daughters that puberty does not mean fitness for reproduction or for married life.

Management.

Puberty is the most critical period in a girl's life. She may ruin her health by not living properly at this time. Mothers, do not be indifferent about your daughters. You know what it means to become a mother. It requires a vigorous and sound constitution, which cannot be obtained without strict attention to the care of the body. You should give your best efforts to your daughters —"the beauty of the world." Give each one time to develop, see that she has good wholesome food, plenty of rest, and carefully regulate her exercise. Do not allow overstudy. When the breasts begin to develop at puberty one part of the gland may grow faster than the other causing a tender and painful swelling which need not be the source of any alarm. Hot applications will relieve the pain and the swelling will disappear. Care for her during the menstrual period as directed in the following chapter.

CHAPTER III.

MENSTRUATION.

Definition:—Menstruation, which comes at regular intervals is characterized by a bloody discharge from the uterus. It first takes place at puberty—which varies with the individual. Menstruation is often referred to by using the terms unwell, menses, menstrual flow, monthly sickness, periods, etc.

Time.

The menstrual flow begins at puberty. In warm climates it occurs earlier in life than in cold. The average age in the United States is fourteen years.

Symptoms.

The symptoms are both general and local. The healthiest of women are more or less affected, although the general and local symptoms may be so slight that menstruation occurs without causing any inconvenience whatever. In others again the symptoms are too severe to be considered normal.

General Symptoms:—There is a general nervous condition manifested by neuralgic pains, headaches, irritability of the bladder, hot and cold flushes, and sometimes diarrhoea. In some women the breasts are swollen

and painful. Digestion and appetite are affected. There is a desire to be languid and active exercise causes great effort. The skin under the eyes may be dark in color and in occasional cases pimples occur on the face, chest, and back.

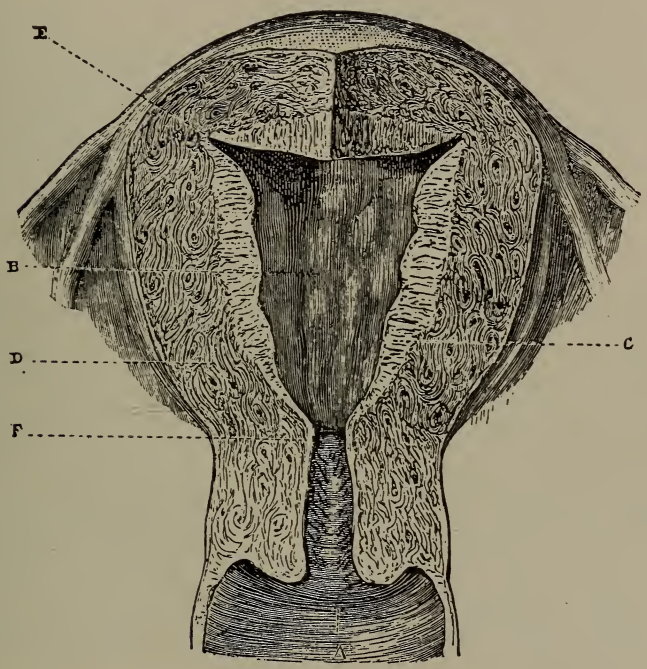


Fig. 29—Showing the uterus during menstruation. Notice the swelling of the entire organ, especially the lining membrane. A, Vagina. E, C, Mucous membrane lining the cavity of the uterus. D, Muscular layer. E, Opening into tube. F, Internal opening into uterus. B, Cavity of uterus. (Courty.) (Garrigues Diseases of Women.)

Local Symptoms:—The beginning of the flow is preceded by a general aching through the pelvic organs, a

bearing down feeling, a sensation of weight in the region of the ovaries, and a bloating of the abdomen.

Regularity.

In nearly all normal cases menstruation occurs every twenty-eight days. Yet every woman is a law unto herself and many vary from the normal and at the same time have perfect health. When a woman is well her case is considered normal whether she menstruates every two, three, or six weeks.

Changes.

In the Uterus:—The uterus becomes enlarged and the lining membrane congested and filled with blood, Fig. 29. This thin lining is destroyed, allowing the small blood vessels to rupture. A flow which comes from the inside of the uterus appears,—the lining membranes and blood passing off together. The destructive process places the womb in a condition for pregnancy. If pregnancy does not occur, the repair process begins and a new lining is formed in about four or five days, and in about fourteen days the womb is again its normal size.

In the Tubes and Ovaries:—The tubes and ovaries as well as the uterus become congested, and this congestion helps to rupture the Graafian follicle, Fig. 30, and Fig. 30 A.

Character of the Flow.

When the menstrual flow first begins it is mucous, containing a little blood. When it is well established, it is is pure venous blood, dark in color, alkaline in action,

Fig. 30—Showing the congested condition of the tube and ovary during menstruation. f, Fallopian tube. l, Broad ligament. o, Ovary. i, End of tube covering ovary. r, r, Shows where old follicles have ruptured. (Garrigues Diseases of Women.)

and does not coagulate. As the flow lessens it again becomes mucous in character.

Duration.

The menstrual flow lasts from three to five days. In some cases, it may be less and in others more, and the woman will not suffer any inconvenience. The duration is less in robust women.

Quantity.

The amount of blood lost at each period varies, but the average is about six ounces.

Cause.

The cause of menstruation is not thoroughly understood. Authorities differ, but it is safe to surmise that it is due to, and regulated by some nerve center located in the central nervous system and stimulated into the action by the growth and rupture of the Graafian follicle in the ovaries.

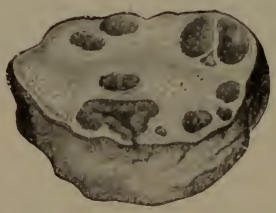


Fig. 30 A—Longitudinal section of ovary of a woman on the first day of menstruation, with one burst follicle opening on the surface and other follicles in diffeerent stages of development. (Leopold.) (Garrigues Diseases of Women.)

Menstrual Life.

The average menstrual life of a woman is thirty to thirty-five years. The earlier in life puberty comes the later will the change appear. Thus, a girl who begins to menstruate at ten years of age will not have the change until fifty years, while the one who does not menstruate

until sixteen years old will change between thirty-five and forty. As a rule when a woman is pregnant or nursing a child, the menses are not discharged. The monthly flow should reappear one month after the baby is weaned.

Care During Menstruation.

1. During the first day of menstruation keep quiet,—remain in bed or occupy a sofa.

2. Make your duties as light as possible during the flow and avoid active exercise, as walking, dancing, or the excitement of theatres or parties of any kind. School girls should not overstudy during this time,—in fact they should do a very small amount of school work.

3. Keep out of all draughts and avoid exposure to the inclemency of the weather.

4. Do not take cold baths or sponges, but keep the body clean and the skin active by taking a daily sponge bath of warm water and soap followed by a brisk rubbing with a bath towel.

5. Clean the external organs twice daily with warm water and soap.

6. Change the napkins often enough so that they will not become over saturated or foul.

7. Do not take a vaginal douche unless ordered by your physician.

8. Avoid sexual intercourse. It will do serious mischief.

9. Keep to a light and easily digested diet. Avoid all highly seasoned foods; alcoholic stimulants are injurious and should be avoided.

Kind of Napkins to Use.

Every woman should supply herself with sterilized napkins. It is best to buy them from some good firm like Seabury & Johnson, manufacturers of surgical dressings. Your druggist can get them for you, or they can be made at home out of plain sterile gauze and absorbent cotton. The ordinary habit women have of using any old piece of cloth should be discarded. None but sterile napkins should be used. If cloths or towels are used they should be sterilized. This can be done by wrapping them in a piece of muslin and heating them in the oven until the outer wrapper is quite brown.

General Remarks.

There are some peculiar conditions in regard to menstruation to be considered in a general way. Cases are reported where women menstruate when pregnant and while nursing their children. Infants are also known to menstruate. The writer had a case that menstruated at one month of age and was regular for two years while under observation. This is a rare occurrence, yet it is not uncommon to hear of cases where menstruation has occurred very early in childhood. This condition is usually attended with development of the breasts, gen-

itals, and the sexual appetite often becomes manifest. Cases are known where pregnancy has taken place. This proves that the organs of generation are developed in harmony with normal puberty. Any prematurely developed condition should be reported to your family physician and great care should be taken of such cases. The moral character of the child should be kept at a high standard and shielded from evil influences and she should be carefully watched to prevent self-abuse. The diet, exercise, and hours devoted to study and sleep should be carefully regulated. The use of cold sponge baths is often beneficial in these cases between periods. When menstruation occurs after fifteen years of age, it is said to be delayed. Cases are reported in which the first menstruation occurred at the age of thirty. Medical attention is necessary to ascertain the cause of delayed menstruation and restore the parts to a normal condition, thus preventing constitutional diseases.

Women who are regular, but flow too much at the time of menstruation, have some displacement or inflammatory condition of the pelvic organs. This excessive flowing demands treatment. Neglect may make surgical interference necessary. Various diseases cause this condition, and the habits of the individual, as high living, alcoholic stimulants, rich food, or a change of climate may result in excessive menstruation. In some cases the

cause is easily ascertained, in others, uncertainty may prevent fit treatment and the case may have a fatal termination. Continued loss of blood destroys the patient's health and renders her liable to death from a trifling intercurrent disease.

There is another condition in which no menstruation occurs. It may be suppressed by taking cold, or from exposure, as in cases of young girls who take cold baths and cold vaginal douches while menstruating. It may be temporarily suppressed by grief, anger, fear, sudden joy or other emotions.

Another condition is known as vicarious menstruation. It is a bleeding occurring from any part of the body at the regular menstrual period, but it does not come from the uterus. It is very scanty, and is often accompanied by a profuse leucorrhoea or diarrhoea. This is a rare condition and is most frequently encountered when the genital organs are not properly developed. It generally occurs from the nose, ear, lungs, and gums, but it may occur from any part of the body, the stomach, intestines, kidneys, bladder, etc. Often the local and general symptoms of menstruation are present. Generally the parts subject to the hemorrhage are congested and painful. The danger of vicarious menstruation is dependent upon the location of the bleeding. Hemorrhages from the lungs and bowels are very serious,

but a graver condition arises when the bleeding takes place in the brain. A physician should immediately be consulted.

Menstruation may be accompanied by pains so severe that it is considered abnormal. Prompt treatment should be given as this symptom is due to a disease located in the pelvic organs or, perhaps, of constitutional origin,—a disease, whatever it may be, which will in time undermine the health.

The location and character of the pain and its relation to the appearance and duration of the flow differ in many instances and depend largely upon the cause of the affection. The patient may suffer from sharp, shooting sensations, or from the heavy, dragging feeling commonly called "bearing-down pains." Rest, suitable exercise, diet, care of the bowels, vaginal douche, and the use of massage and electricity are a necessity. It is of great importance to the patient that the treatment should be conducted under the personal supervision of a competent physician.

CHAPTER IV.

CONCEPTION.

Definition:—Conception or impregnation is the union of the ovum and spermatozoon. They are known as the two generative elements, and when they unite the formation and growth of the child begins.

The Ovum is fully explained in Chapter I, the ovaries.

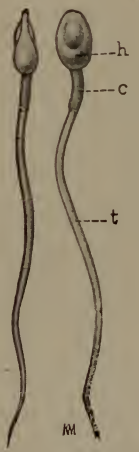


Fig. 31—Human spermatozoa. h, Head. c, Body. t, Tail.

The Spermatozoa, Fig. 31, are formed in the testicles and ejaculated in the semen, a fluid which passes from the man indulging in sexual intercourse. They consist

of three portions, head, body and tail, and are shaped somewhat like a tadpole. The head is somewhat flat and pointed; the body, short; the tail, long and thin. By the rapid vibration of their tails they can move about one-twelfth of an inch per minute. They are only one six-thousandth of an inch in diameter. As a rule spermatozoa make their first appearance in boys of the age of sixteen years. They are constantly reproduced in man —in most cases until the end of life. In the adult one drop of semen contains hundreds of spermatozoa, and from sixty to one hundred drops are expelled from a man at each normal intercourse.

When Conception Occurs.

Conception may occur at any time, but a woman is more liable to become pregnant just before or after menstruation. Experience teaches that the best chance for impregnation to take place is offered just before the flow. Both the ovum and spermatozoon may remain in a normal and active state in the tubes for several days, or even weeks.

How the Union of the Ovum and Spermatozoon Takes Place.

Generally one spermatozoon will impregnate the ovum. The germinal vesicle undergoes some changes, enlarges in size, and moves to the edge of the ovum. The spermato-

zoon nearest the germinal vesicle penetrates the ovum, Fig. 32. After entering the germinal vesicle and uniting with the germinal spot the spermatozoon throws off its tail, the head flattens and enlarges, the two elements fuse together and form a new body. The manner in which this union takes place is more fully illustrated in Fig. 33. A, B, and C represent an enlarged germinal vesicle; the large white spot in the center of A and B, the germinal spot, the white spot in the center of C, the union

Fig. 32—Showing the approach and fusion of the spermatozoon and ovum. a. Spermatozoon. b. Ovum with germinal vesicle near the edge. b' b'', Different stages of the ovum and spermatozoon. (Garrigues Diseases of Women.)

of the spermatozoon and germinal spot. This union must take place before conception can occur.

The further development of the ovum will be considered in Chapter VI.

The Place Where the Ovum and Spermatozoon Meet.

During copulation the semen is deposited in the vag-

ina, but the question is, how does the spermatozoon get into the uterus, and where does it meet the ovum?

The weight of authority teaches that the spermatozoa enter the uterus by their own movements, as it has been shown that they can move at a rapid rate. This theory is proven by the fact that women have become pregnant when connection was imperfect.

One authority claims that at the height of orgasm, the uterus contracts, then expands quickly, drawing the semen up into itself.

Another belief is, that the thick mucous found in

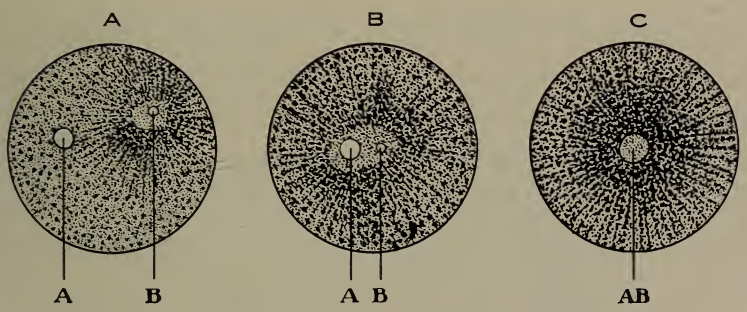


Fig. 33—Showing the union of the germinal vesicle and spermatozoon. a, First stage of approach of the spermatozoon to the germinal spot. b, Second stage. c, After union has occurred. A, Germinal spot. B, Spermatozoon.

the cervix protrudes from the uterus during connection and after being covered with spermatozoa is drawn back into the uterus. The first theory mentioned is the accepted one, that is, the spermatozoa reach their destination by their own movements.

Since the ovum and spermatozoon move by their own or external forces from place to place, impregnation may take place in the tube, uterus or ovaries. The ovum and spermatozoon generally meet in the tube, from whence they are carried to the uterus where pregnancy develops. Pregnancy, however, may develop in the tube or in the ovary if spermatozoa are present when the follicle ruptures. The ovum may be impregnated before it escapes from the follicle. When pregnancy develops outside of the uterus, it is called extra uterine or tubal pregnancy. See Tubal Pregnancy, Chapter V.

How the Ovum Gains Access to the Tube.

After the Graafian follicle ruptures and the ovum is free, it is interesting to note the manner in which it enters the tube. Many authors have advanced as many theories, but the one considered as best, with the most satisfactory proof, is the one we mention. Between the pelvic organs is a certain amount of fluid, only enough to keep the surface well moistened. This fluid is kept in motion to a greater or less extent by the free end of the tube (the fimbriated part). When the ovum escapes it is caught by the wave-like movement of the fluid and carried into one of the tubes, whence it goes to the uterus. An ovum from one side may enter the tube on the other side. Many ova which escape from the follicles do not enter either tube but perish in the abdominal cavity.

CHAPTER V.

TUBAL PREGNANCY.

Definition:—By tubal pregnancy we mean that pregnancy develops in the tube and not in the uterus; it is often called Extra-Uterine, or Ectopic pregnancy. The ovum becomes permanently arrested in the tube and tubal pregnancy occurs.

CAUSE.

Tubal pregnancy occurs in about one out of five hundred cases, more frequently after a long period of

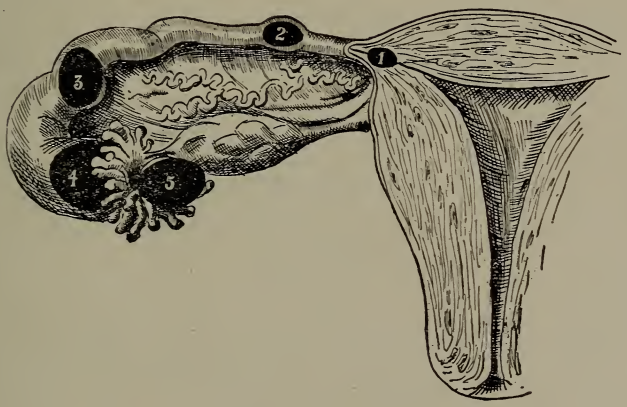


Fig. 34—Showing location of tubal pregnancy. 3 and 4 most common location. 2 next in frequency. 1 and 5 rarely occur. (Gilliam's Practical Gynecology, copyright F. A. Davis Company.)

sterility, or immediately after confinement. It may occur at the same time that normal pregnancy occurs. No period in child-bearing life is exempt. Any obstruction in the canal would be a cause for tubal pregnancy. It may be the result of inner inflammation or of a pressure of tumors on the outside.

LOCATION.

When tubal pregnancy occurs in the tube it may be located anywhere in the canal, but most frequently as illustrated in Fig. 34.

SYMPTOMS.

When the foetus begins to develop in the tube it generally gives rise to early symptoms of pregnancy. The shock of a free internal hemmorhage caused by rupture of the tube is at times the first symptom noticed. Usually the lining membrane of the uterus is cast off in the form of shreds. The great loss of blood may cause a woman to believe that she has had a miscarriage. At times only a slight amount of blood of a dirty brown color is passed irregularly. A woman who has a tubal pregnancy complains of pains in the abdomen and low down in one side; the pains come and go. These patients generally give a history of sterility. If the pregnancy goes on past the third month, milk will appear in the breast.

CHANGES THAT TAKE PLACE IN THE UTERUS DURING TUBAL PREGNANCY.

During the development of the foetus in the tube the uterus becomes enlarged and the cervix is very soft. If the developing child dies, the uterus does not enlarge any more, but when tubal pregnancy continues to full term or near that time, the uterus will enlarge to the size of a normal four months pregnancy.

HOW TUBAL PREGNANCY ENDS.

Tubal pregnancy will terminate in one of four ways:

1. Tubal abortion.

Fig. 35—Showing tubal abortion of the product of conception into the abdominal cavity through the end of the tube. (Ashton's Practice of Gynecology.)

2. Rupture of the tube.
3. Death of the child.

4. Development of child to full term.

1. **Tubal Abortion,** see Fig. 35. If tubal abortion occurs it will do so before the second month. It is generally accompanied by severe hemorrhage. If only a partial expulsion takes place the bleeding is profuse and the patient quickly dies as a result of internal hemorrhage.

2. **Rupture of the Tube.** Tubal pregnancy usually ends in the rupture of the tube in one of three directions, Fig. 36. It may be toward the abdominal cavity, into the folds of the broad ligament or into the uterus. The abdominal rupture is the most common form and

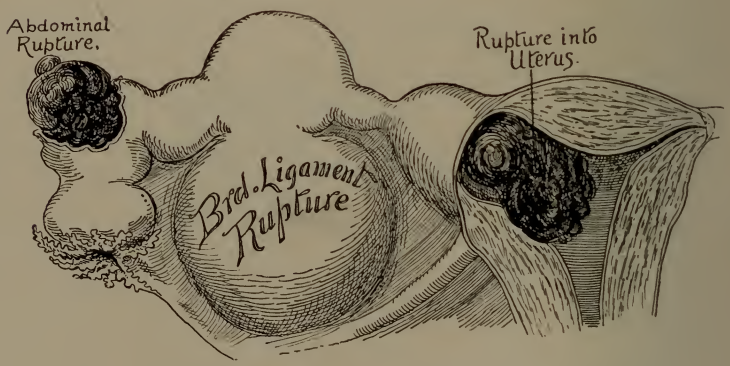


Fig. 36—Showing the three directions in which a rupture of a tubal pregnancy may take place. (Ashton's Practice of Gynecology.)

the patient usually dies within a few hours unless the bleeding is immediately controlled by a surgical opera-

tion. If the blood is confined in the folds of the broad ligaments the child will probably die. In time the blood and product of conception may be absorbed; if not, the mass becomes infected and forms an abscess. If the walls of the broad ligament are not strong enough to hold the blood it ruptures into the abdominal cavity with the same results as if the tube ruptured directly.

If the tube ruptures into the uterus it occurs very slowly. If the placenta remains attached, the child may be developed and be delivered at full term. If the rupture of the tube into uterus occurs rapidly, as it sometimes does, then the product of conception is often expelled through the uterus and a surgical operation is required.

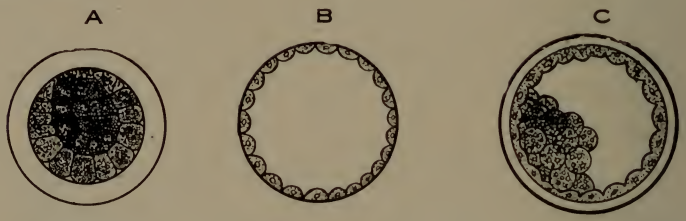
3. If the foetus dies during the first or second week it may remain in the tube and not cause any trouble for some time. In time the mass will cause irritation so severe that an operation will be necessary.

4. Very rare cases are recorded where the child developed in the tube to full term, then died. Other cases are known where the child lived to the end of normal pregnancy and the mother and child were saved by operation.

CHAPTER VI.

HOW THE CHILD DEVELOPS IN THE UTERUS.

It is best not to enter into the details of embryology to any great extent, as it is quite complicated and difficult to understand, but there are a few essential points of interest with which a woman should be familiar if she wishes to comprehend the subjects of pregnancy and abortions.



Figs. 37, 38, 39—Showing the first three stages of development of the foetus. a—Fig. 37, first stage; b—Fig. 38, second stage; c—Fig. 39, third stage.

THE MEMBRANES.

Soon after the germinal vesicle of the ovum and the spermatzoon meet, there begins a process of cell division, each cell dividing and forming two cells. The process continues until the original ovum becomes converted into a mass of cells, Fig. 37. After the cells are formed in the ovum a fluid gathers among them forcing them to the

side, thus, we have a single layer of cells surrounding a cavity filled with fluid, Fig. 38. The next change is a collection of cells at one point on the inner surface of the single layer of cells forming the walls of the vesicle just mentioned. These changes go on during the first few hours of pregnancy while the fertilized ovum is coming down the tube. Several new membranes are formed inside the vesicle by the group of cells as illustrated in Fig.

Fig. 40—Human ovum of eight days showing how the villi completely cover the outer surface of the ovum. (Williams' Obstetrics.)

39. The outside membrane unites with the single layer of cells, Fig. 38-B, and forms the outside membrane of the ovum. It is called the chorion. It is smooth at first, but it becomes shaggy by growth of processes called villi. The villi at first cover the whole outside surface of the ovum,

Fig. 40. Later they are found only at the place where the ovum is attached to the uterus, this being the point where the placenta (afterbirth) is formed. Another membrane begins to grow from these cells and its edges unite, forming a sac. The outer surface is in contact with and slightly joined to the inner surface of the chorion. This membrane is called amnion. The sac or cavity becomes filled with liquid (liquor amnii) known as the bag of water. The fluid increases in amount as pregnancy advances. The average amount is from one to four pints. It takes up the urine which is occasionally voided by the child and protects it against injury. It affords some nourishment and by allowing free movement of the child in the uterus, favors the development of the limbs. It acts as a bag to dilate the cervix during labor and moistens the walls of the vagina to make labor easy.

Other membranes with their many subdivisions, foldings, and peculiar growths are formed from this same group of cells and are used directly in the formation of the child. It will suffice to say that one membrane forms the spinal cord, brain, organs of special sense and the skin; another forms the blood vessels, bone, and muscles; another, the lungs and the alimentary canal, and another is used to line the serous cavities of the body.

While all these changes which result in the rapid growth of the child are going on, the part of the ovum

next the uterine wall where the group of cells are attached has been developing with equal rapidity and unites with the decidua and the cord to form the afterbirth.

We have been considering the membrane which forms the child, but before we take up the study of the placenta,

Fetal surface of the placenta.

Fig. 41—Showing the side of the placenta next to the child. This is the side that is covered with the amnion and chorion. (Garrigues' Text-book of Obstetrics.)

let us describe more fully the changes which take place in the lining membrane of the uterus to prepare it for the reception of the ovum.

The Decidua is the lining membrane of the uterus after it has undergone certain changes caused by pregnancy to fit it for the attachment and nutrition of the ovum. It is called decidua because it is cast off after labor. It is a new growth composed of several layers and

Maternal surface of the placenta.

Fig. 42—Showing the side of the placenta next to the uterus. This is the decidual part. (Garrigues' Text-book of Obstetrics.)

is fastened to, in fact is, a part of the uterus for the time being. Its surface has deep furrows and depressions to which the villi find access.

At the termination of labor all of the decidua, except that part assisting in the formation of the placenta, has

become very thin because of the immense size of the uterus.

The placenta is formed at the spot where the ovum is attached to the inside of the uterus. The membranes and the decidua that form the placenta at full term are about one inch in thickness in the center and somewhat thinner around the edges. It is circular in shape, and

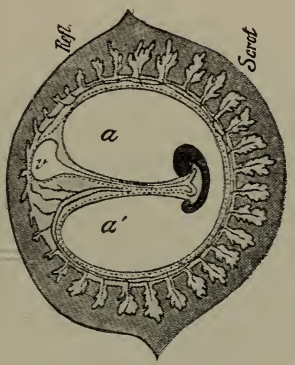


Fig. 43—Showing the formation of the cord. a-a—is the liquor amnion, the dark ojbect is the foetus, the membrane extending from v to foetus is the cord, the leaf-like objects are the villi. (Garrigues' Text-book of Obstetrics.)

from six to eight inches in diameter. The side next to the child is smooth and covered with amnion, Fig. 41. Under the thin and loosely attached amnion are seen the blood vessels. The cord is attached to this side in the center. The side next to the uterus, Fig. 42, is the decidua, and under it are the villi of the chorion. It is very rough

and has many deep furrows leaving small round islands between the depressions. The placenta is generally located high up on the back part of the inside of the uterus. The lower edge extends about four inches above the internal opening into the uterus.

THE CORD.

The umbilical cord, Fig. 43, extends from the abdomen of the child to the center of the afterbirth (Figs.

Fig. 44—Showing a cross section of the umbilical cord. c—outer covering. v.u.—umbilical veins. a.u.—umbilical artery. (Garrigues' Text-book of Obstetrics.)

41 and 42 show cord attached to the afterbirth.) It is about twenty inches long and the average size is about that of the index finger, larger or smaller as the case may be. The cord is composed of two arteries and one vein

Fig. 44, a gelatine substance and an outside covering formed by the amnion. It has no nerves.

NUTRITION.

The ovum is nourished before and after conception by absorbing its nutrition from any tissue with which it

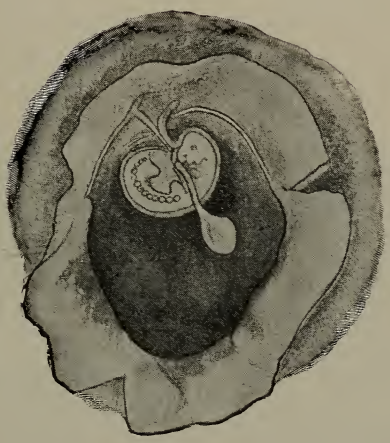


Fig. 45—Human ovum with child of four weeks, natural size. (Garrigues' Text-book of Obstetrics.)

comes in contact. Then the villi which absorb fluid like the roots of a plant are formed on the outside of the ovum, Fig. 49. As pregnancy advances the villi and the chorion with the blood vessels grow into the decidua and

nourishment is derived through them from the mother's blood. Finally when the placenta and cord are formed, all nutrition passes through them, yet there is no change in the way in which it passes, that is, there is no direct connection between the blood of the mother and child. All the nutrition which the child receives must be taken by absorption. It will be interesting to note that gases such as chloroform and ether, fluids, and various drugs, can be transferred to the child through the placenta by the villi of the chorion, and the mother may affect her unborn

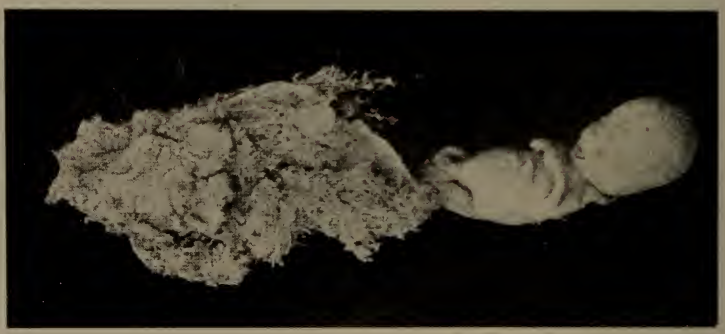


Fig. 46—Human ovum and child at the end of the second month; actual size. Wood's Museum, Bellevue Hospital. (Garrigues' Text-book of Obstetrics.)

child by taking medicine. Only medicines prescribed by a physician should be taken by a pregnant woman.

The child also receives some nourishment from the liquor amnii—that it swallows large quantities of this

fluid is proved by the fact that scales of baby skin and hair from the head is found in the first movement of the bowels. The element of nutrition in the liquor amnii is in the form of albumen water.

FIRST MONTH.

The membranes grow and the child develops very rapidly during the first month, Fig. 45. The parts which

Fig. 47—Human foetus, 3 months old, natural size. (Williams' Obstetrics.)

later form the eyes, ears, and nose make their appearance. At the end of the first month the embryo measures from three to four-tenths of an inch in length.

SECOND MONTH.

In this month the head enlarges and develops out of proportion to the rest of the child; the part which forms the nose, mouth, and ears is not so prominent. The arms and legs are more developed and at the end of this month the embyro begins to look like a human being. The membranes which form the external genitals make their appearance when the child has attained the length of an inch. Fig. 49 represents a six weeks pregnant uterus with elongation of the cervix showing the extent to which the uterine cavity is occupied by the ovum.

Fig. 48—Child of eight weeks, natural size.

THIRD MONTH.

The product of conception is about as large as a goose egg at the end of the third month, and from three to four inches long. The bones are becoming well formed, the fingers and toes are supplied with nails and the external genitals are becoming well defined, Fig. 48.

FOURTH MONTH.

By the end of the fourth month the child is from five to six inches long and weighs about one-fourth of a pound, and the external genitals reveal the sex.

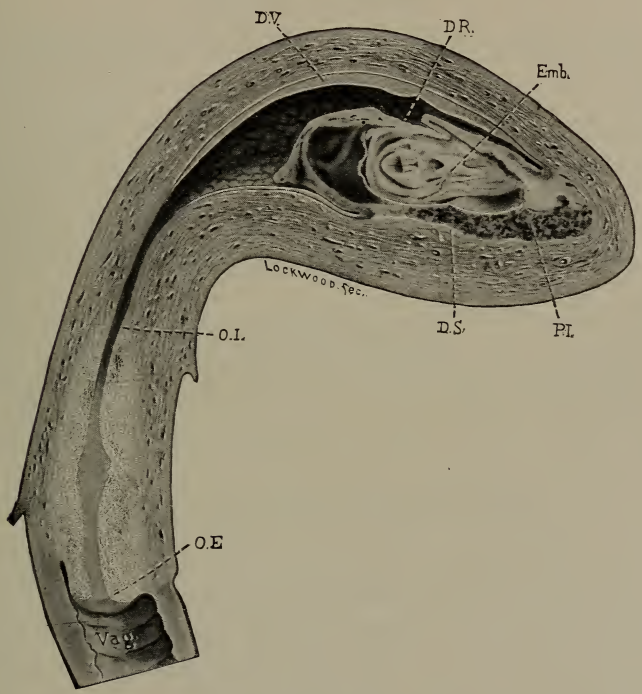


Fig. 49—O.E.—external opening; O.I.—internal opening; D.V., D.S. and D.R.—decidua; Emb.—foetus; P.I.—afterbirth. Note the length of the cervix and the extent to which the cavity of the uterus is occupied by the ovum. (Williams' Obstetrics.)

FIFTH MONTH.

The length of the child at the end of this month

varies from eight to twelve inches and it weighs from one-half to three-quarters of a pound. The skin is not so transparent, down covers the body, and a small amount of hair begins to appear on the head.

SIXTH MONTH.

The child weighs about one and a half pounds at the end of the sixth month and is from fourteen to eighteen inches long. The skin becomes wrinkled and fat is deposited under it, and the head is still comparatively quite large. A child born during this month will attempt to breathe and move its limbs, but always dies within a short time.

SEVENTH MONTH.

The child does not grow very much in length during the seventh month, but almost doubles in weight. The skin is thin and red. If it is born at this time it will cry in a weak voice, move its limbs quite freely, but as a rule it cannot live. It is generally believed that a child born at the end of the seventh month has a better chance of living than if it is born at the end of the eighth month. This is not true, as the more developed the child the greater are its chances for life.

EIGHTH MONTH.

During this month the child gains both in length and weight. Its weight is about four pounds and it attains the

length of twenty inches. The surface of the skin is still red and wrinkled and the child looks like an old person. If it is born at the end of this month it has only a fair chance to live, with the most expert care.

NINTH MONTH.

At the end of this month the child is on an average twenty-one inches long and weighs five pounds. The body becomes full and round and the face has lost its wrinkles. Children born at this age generally live if they have the proper care.

TENTH MONTH.

Full term is reached at the end of this month. The child has fully developed and presents the appearance which is considered in detail in "HELPFUL HINTS FOR MOTHERS," Chapter XXII.

THE DURATION OF PREGNANCY.

The average duration of pregnancy from the beginning of the last menstrual flow to the onset of labor is two hundred and eighty days, or ten lunar months, yet many children are born shortly before or after the expiration of that period.

SEX OF THE UNBORN CHILD.

Prospective mothers are deeply anxious to know of any means by which the sex of the unborn child can be

determined. It is amusing to hear the various theories advanced about the signs of sex. Many of these are too absurd to be repeated. Even the most learned medical scientists contradict each other in their ideas upon the subject.

Some claim that the age of parents has its influence, that is, a young wife whose husband is several years older than she is apt to give birth to boys. Again, some think that sex is determined by the stronger parent; others believe that when conception occurs just before menstruation it favors the birth of girls, if after menstruation, the birth of boys.

It is a fact that more boys than girls are born. The ratio is about one hundred and six to one hundred, and the proportion is increased in women who have had several children. If a woman gives birth to her first child after she is thirty years old the proportion increases to one hundred and twenty to one hundred. At the fiftieth year it is one hundred and forty to one hundred.

At one time it was generally believed that sex was not established until some time after conception occurs, but recent investigation shows that sex is determined in the germ cells, the moment cell division begins in the ovum. It is a well known fact that when twins are derived from the same ovum they are the same sex, but when each is

derived from a different ovum the sex may or may not be the same. However, we cannot make any positive statements. No woman when she is pregnant can tell whether her child will be a boy or a girl. One thing only we can say positively,—the weight of authority tells us that the determination of sex is a function of the ovum.

CHAPTER VII.

STERILITY.

Definition:—A woman who never becomes a mother is said to be sterile. She may become pregnant but be unable to carry the child to full term. Until recent years it was believed that the woman was the sole cause of sterility, but investigation proves that the man may be at fault as well. Therefore, the sterility of the man must be considered in all cases of marriage in which there are no children born.

Certain normal conditions must exist in a woman before she can become pregnant and bear children. The uterus and its lining membrane (endometrium) must be in a healthy condition. There must be normal secretions in the vagina and a capacity for copulation. An ovum must be present.

Sterility is considered normal in women before puberty, while nursing a child, and after the menopause. Sometimes a woman ceases child-bearing many years before she has the change of life.

CAUSE OF STERILITY IN WOMAN.

Sterility in woman may be produced by congenital

or acquired causes. In the first case the female organs are not properly developed from birth. In the second, the organs are injured by inflammation due to various diseases.

IN CASES OF CONGENITAL STERILITY WE MAY HAVE

1. An absence of the vagina or the growth of a septum across the vagina near the uterus, thus preventing normal copulation.

2. A very short vagina which will not hold the semen.

3. Absence or non-development of the uterus.

4. A cervical canal closed at its opening into the uterus.

5. Absence or non-development of the Fallopian tubes. A very trivial tubal lesion may be responsible for sterility.

6. Absence or non-development of the ovaries.

THE ACQUIRED CAUSES OF STERILITY ARE

1. Severe inflammation of the vaginal wall.

2. A vaginal discharge that is acid in reaction.

3. Inflammation or any diseased condition of the inside of the uterus. This is the most common cause of sterility.

4. Inflammation of the Fallopian tubes. Conception is frequently prevented by a surprisingly slight abnormal condition of the tubes.

5. Displaced ovaries or ones bound down by adhesions. Any ovarian inflammation is apt to prevent the rupture of the Graafian follicles and is usually attended with sterility.

General Causes. In some cases the pelvic organs may be normal, yet a woman cannot become pregnant on account of great obesity. Those who accumulate fat rapidly before or just after marriage seldom have children, although some fleshy women give birth to one or two. Women who are anaemic (lack blood), or who have kidney trouble, consumption, cancer, and syphilis are not likely to conceive. It is said women who masturbate are often sterile.

CAUSE OF STERILITY IN MAN.

The wife is not always at fault. The husband whose semen is without spermatozoa is sterile. He may infect his wife with gonorrhoea or syphilis—specific diseases which may lead to inflammation of the uterus and tubes. If she is sterile he is indirectly responsible. The husband may not be able to properly perform the act of copulation or he may have a scanty secretion of seminal fluid. When we consider these causes of sterility in man we know him

to be responsible for about one in four of all childless marriages.

REMARKS.

To correct this condition the husband must be thoroughly examined as well as the wife, as the treatment is based upon the removal of any local or general cause which may be present. In many cases, when the cause is known and removed, the physician who treats the case cannot promise with certainty that pregnancy will follow. Again pregnancy may occur in cases under the most extraordinary circumstances at an early age, and many cases are reported where women who married never conceived until late in life. As a rule women menstruate but once after marriage before they become pregnant, yet a perfectly healthy woman may be married several months before conception occurs; so we cannot speak positively one way or the other. The patient should decide if she wishes to be operated upon, or take treatments to relieve the abnormal or diseased condition. Many times a dilatation and a currettage of the uterus, a simple operation devoid of all danger, will act like magic. The good results more than compensate for the temporary inconvenience. To operate upon the tubes is a more serious matter as the abdomen must be opened. It lies with the patient to decide whether she wishes to take the risk in order to become a mother.

CHAPTER VIII.

ABORTION, MISCARRIAGE, AND PREMATURE BIRTH.

Definition:—Abortion is defined as the casting off of the product of conception before the end of the fourth month of pregnancy. Between the end of the fourth and seventh month it is called a miscarriage. After that time it is best termed premature birth as there is a possibility of the child living if it is born after the seventh month.

CAUSES.

Anything that will cause the death of the foetus, a degeneration of the membranes of conception, or an impaired blood supply to the decidua may produce abortion. The following conditions will cause expulsion of the foetus:

1. Diseases of the heart, kidneys, liver and lungs, due to imperfect blood.
2. The use of poisonous drugs, illuminating gas, or similar substances.
3. Changes in the placenta due to syphilis.
4. Diseased condition of the decidua due perhaps to

a previous inflammation of the lining membrane of the uterus.

5. Inflammation of the tubes and ovaries.
6. Displacement of the uterus.

HOW ABORTION OCCURS.

After the foetus dies, the blood supply of the decidua changes, the tissues which form the product of conception degenerate, the ovum becomes detached from the uterine wall, and the mass acts as a foreign body. Uterine Fig. 50. After that time, as a rule, the foetus is expelled,—both membranes and decidua.

The spontaneous expulsion of the ovum may occur at any period of pregnancy. When it occurs before the afterbirth forms, the entire ovum may come away intact, Fig. 50. After that time, as a rule, the foetus is expelled first and the placenta and membranes follow after a longer or shorter period. Sometimes only the foetus and sac containing it (the chorion with villi attached) comes away, leaving the decidua in the uterus, Fig. 51.

In many instances the process of abortion occurs very slowly, and in this case the blood becomes clotted between the ovum and the decidua. The blood clots surround the ovum and it is passed off in this form resembling a blood clot, in whose center is a small cavity filled with fluid and lined with a smooth membrane (the am-

nion). The umbilical cord hangs from one point in the sac while the other end is attached to a degenerated foetus.

SYMPTOMS.

Abortion is usually preceded by certain symptoms. Those which need special consideration are chills, hemorrhages, pain, and vomiting.

1. **Chills.** Just before a woman has an abortion she generally has one or more chills.

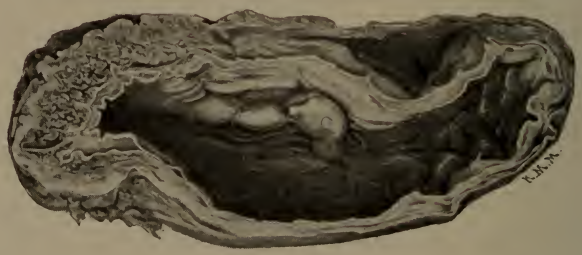


Fig. 50—Showing an early abortion. The decidua and foetus degenerated. (Williams' Obstetrics.)

2. **Hemorrhage.** The loss of blood, no matter how slight, during the first months of pregnancy should be regarded with suspicion. It generally indicates a diseased condition of the endometrium or that the placenta is not attached in its normal position. When the hemorrhage is due to the increase of blood in the decidua it is a dirty brown color; when it comes from the placenta it is more profuse and a bright red. The bleeding may continue for

days or weeks before abortion takes place, or the ovum may be expelled immediately after the hemorrhage begins.

3. **Pain.** After the process of abortion has gone on

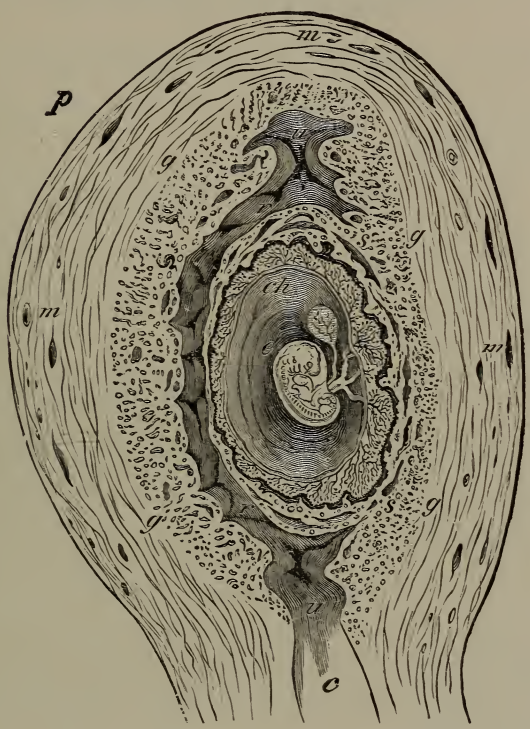


Fig. 51—A pregnant uterus and ovum of five weeks. u—uterine cavity; g, s, and r—the decidua; ch—chorion with the villi; e—foetus in a close fitting amnion; m—muscular wall of the uterus. (Garrigues' Text-book of Obstetrics.)

for some time, pains begin. They are of a bearing-down nature and increase in frequency and severity as the uter-

ine contractions increase in force.

4. **Vomiting.** Vomiting is not always present but it occurs in a great many cases.

THREATENED ABORTION.

When a pregnant woman begins to flow and have pains in the back and lower abdomen, she will probably have an abortion.

IMMINENT ABORTION.

When the flow is very profuse abortion is imminent, but even then it may subside and pregnancy go on to full term without interruption.

INEVITABLE ABORTION.

When the membrane ruptures and the liquor amnii escapes it is certain that abortion will take place and cannot be prevented.

COMPLETE ABORTION.

In this case the ovum is expelled intact (Fig. 50), from the uterus and no membrane retained; it is then called complete.

INCOMPLETE ABORTION.

When the membranes rupture and the liquor amnii escapes and the foetus alone is expelled, leaving the placenta and membranes in the uterus, it is known as incom-

plete abortion. In such cases the hemorrhage continues until the uterus expels the retained placenta. When this occurs both hemorrhage and pain stop and the uterus contracts and in a short time resumes its natural size.

DANGERS OF ABORTION.

The two great immediate dangers are hemorrhage and blood poisoning. Women are in the habit of considering an abortion or miscarriage a very trivial affair, while in reality it is very serious and demands the best medical attention. Women often suffer for their foolhardiness and neglect. When one is pregnant and has any symptoms of an abortion she should go to bed and call her physician at once to avoid complications and if possible prevent the expulsion. The same care and the same scientific treatment are needed in this class of cases as in a confinement. No civilized woman would think of giving birth to a child one day and getting up the next, but it is not uncommon for a woman to have an incomplete abortion and be up going about her daily duties. The retained decidua and afterbirth decompose, and blood poison is the result. Here let us say a word about Criminal Abortion. You will understand, we trust, that this applies to a class of cases for which we have no better term. The practice of criminal abortion by charlatans is common in this country and is condemned by the medical profession. Women

often perform an abortion on themselves by introducing something into the uterus. They generally use a stiff catheter, lead pencil, slate pencil, or elm tents,—in fact almost anything that will open the uterus. They often take drugs that some would-be friend recommends, or of which they have read, in order to cause the expulsion of the ovum. It is estimated that in the United States over one million children are killed in the uterus every year. Many women do not regard abortion as a great crime and think little of its danger to health and life. Figs. 52 and 53 show well the result and we wish every woman could be taught to realize the seriousness of such practice. **Stop it,** should be their watchword.

THE CONSEQUENCE OF ABORTION.

It is an unfortunate fact that a vast number of women are invalids as a result of abortions. If they have blood poison and recover, the pelvic organs are generally left in a weakened condition. Abscesses often form back of the uterus, or about the tubes or ovaries. Putrid infection in the uterus from retained membranes may cause lockjaw,—the poison being transferred to the nerve center. Sometimes the mind becomes involved and chronic melancholia is the result, but the attack is not so severe as when it follows labor at full term.

The various joints of the body may become in-

Fig. 52—The results of criminal abortion. Showing the uterine wall perforated with elm tents. Blood poison and death. Specimen removed at autopsy. (Kelly's Operative Gynecology.)

Fig. 53—Showing a uterus perforated by a tupelo tent causing peritonitis. The uterus was removed and patient recovered. Operation performed by Dr. W. E. Ashton of Philadelphia. (Kelly's Operative Gynecology.)

flamed and pus may form. We were once called in consultation to see a patient who gave a history of a secret abortion. The ankle of the left leg was greatly enlarged, very red and extremely painful. The abortion had caused pus to form in the joint.

Do not use the toilet during an abortion as the gas from the sewer has been known to cause blood poison.

In dismissing this subject we desire to say that if the reader is ever so unfortunate as to have an abortion, we trust she will immediately consult a physician. The best of care is necessary, for even under the most scientific management the results are frequently disastrous.

CHAPTER IX.

THE MENOPAUSE
or
CHANGE OF LIFE.

Definition:—The menopause is the period in a woman's life when menstruation ceases, and, as a rule, she does not become pregnant. It comes on and ends gradually, often lasting two or three years. It causes considerable mental disturbance; at the same time both general and local physical changes occur.

TIME.

The menopause generally occurs between the age of forty-five and fifty; menstruation becomes irregular, less in amount, and finally ceases altogether. As a rule, women who begin to menstruate early in life have the menopause later than those who begin to menstruate after sixteen years of age. Climate and certain other conditions have their influence. We make the following classifications:

1. **THE MENOPAUSE OCCURS EARLY IN LIFE.** (a) in cold climates, (b) in fat women, (c) in hard-working women, (d) in sterile women or those who have never

had any children, (e) in women who have had children rapidly early in life, (f) from sudden fear or grief, (g) when the tubes and ovaries have been removed, (h) in cases where the patient has had any severe illness.

2. **THE MENOPAUSE OCCURS LATE IN LIFE.**

(a) in hot climates, (b) in slender women, (c) in the rich and indolent classes, (d) when the tubes, ovaries, and uterus are inflamed or diseased. In the latter case the flow may continue indefinitely. Heredity plays an important part. The daughter will generally have the change at the same age as the mother.

CHANGES AND CONDITIONS THAT OCCUR DURING THE MENOPAUSE.

The uterus and ovaries become small and hard and usually the breasts decrease in size. If they become larger it is due to an increase of fat. Cancer often appears on the breast and uterus during the menopause. The nervous system receives a severe shock, and it is not uncommon for women to go insane. There are frequent rushes of blood to the head which causes a feeling of great heat, headache, dizziness, a red face, and restless sleep accompanied by dreams.

If there is any chronic disease affecting the stomach, bowels, liver, or kidneys they are much worse during the

menopause. Women while passing through this stage of life perspire very much and the skin often has an itching, burning or smarting sensation of the most distressing nature. Temper is subject to radical changes, the sexual appetite is increased and leucorrhoea is often present. The heart often feels weak or its action may be greatly increased. In this case patients faint easily and have difficulty in breathing.

Any of the above symptoms or a combination of them appear in a woman who is having the change, and last for a week at a time. The attacks (except cancer and insanity) begin and disappear gradually.

As a rule the whole appearance of the woman changes at the menopause. Most women increase in size and weight and become very stout, others may lose flesh.

GENERAL REMARKS.

While the menopause is a normal condition and must occur in every woman's life, it is not free from danger of an alarming nature. Women who previously enjoyed fairly good health may have a complete mental and physical break-down. No woman can afford to enter this critical period in life in a diseased or weakened condition. She should have pleasant surroundings and occupy the mind with useful work. The pelvic organs should be in a normal condition, any tears in the cervix should be

repaired so as to prevent cancer. If there is any disease of the uterus, tubes or ovaries it should be cured before the menopause begins; this will greatly reduce the nervous strain.

After a woman has prepared for such a crisis she should keep her system in the very best condition by paying special attention to hygiene. We suggest the following regulations:

1. Keep the bowels and kidneys active with aperient waters or a little bicarbonate of soda in a half glass of water three times a day. Often an enema of plain water with a little glycerine added is beneficial for the bowels.

2. A cold sponge bath followed by rubbing the skin with a Turkish towel is pleasant and invigorating and should be taken in the morning, but not when menstruating.

3. Congestion of the head is often relieved by taking hot foot baths at night.

4. A warm (not hot) bath two or three times a week will keep the skin and nerves in a good condition.

5. The diet for women who become fleshy and stout should be composed of fish, meat, green vegetables, and fruit. Avoid cereals, sugar, milk, and beer. Do not drink too much water.

6. The diet for women who lose flesh must consist of

fat producing food, such as chocolate, milk in large quanties if they can digest it, plenty of cereals, and any kind of meat. Either fleshy or thin women should use weak tea or coffee.

7. During the menopause a sudden stopping of the flow is, as a rule, very dangerous. Great care must be taken while the woman is menstruating that the skin does not become chilled, nor must she take a cold bath or wash the genitals with cold water, or get the feet wet.

8. Avoid all excitement in any form. Too frequent sexual intercourse will cause the pelvic organs to become congested.

CHAPTER X.

WOMAN AND HER AILMENTS.

If we wish to educate the young women, mothers and wives, in such a manner that they may protect their health and happiness, we can do nothing better than go into detail about the sources of those female diseases which a woman can prevent. A woman has no control over Hereditary and Congenital influences. It has been stated in a previous chapter that the condition existing in the mother may develop in the daughter at the same age and in the same way, and affect her as it did the mother. It will be noticed that an inherited tendency to consumption or cancer is a predisposing cause of the diseases. If a woman should have smallpox, measles, scarlet fever, or any disease while pregnant, it would interfere with the development of the child to such an extent that the pelvic organs would be arrested in their normal growth, making the daughter susceptible to certain fundamental and organic disorders.

A woman who is physically weak will generally have painful menstruation, displacement of the uterus, and leucorrhoeal discharges; again, congenital influences,

when the pelvic organs are not properly formed, will result in various diseased conditions, thus: the uterus may be double, two-horned, one-horned, or may develop but very little after birth. A uterus of this order is called an infantile uterus, Figs. 54-55-56-57-58-59-60. There may

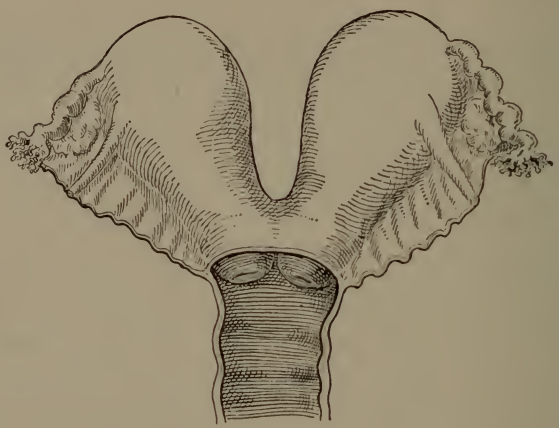


Fig. 54—Showing a double uterus, two perfect bodies with only one tube and ovary for each uterus. (Ashton's Practice of Gynecology.)

be some abnormal condition of the tubes, one or both may be defective. Cases are recorded where one or both tubes were absent. The tube may be double, Fig. 59, or it may have two openings, Fig. 60.

The ovaries as well as the uterus and tubes may not be properly developed and it is not uncommon to find this condition of the ovaries when there is a one-horned uterus or an absent Fallopian tube.

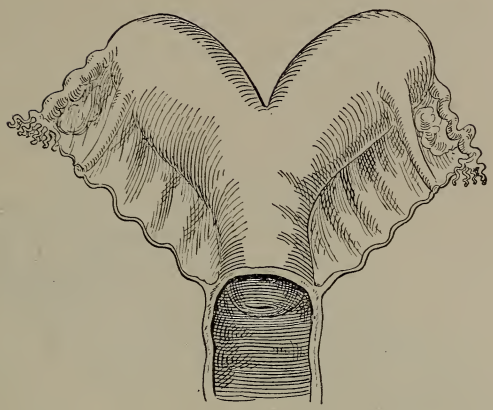


Fig. 55—Showing a two horned uterus. Notice in this illustration there is only one cervix, while there are two in Fig. 54. (Ashton's Practice of Gynecology.)

When we note the relation of the uterus, tubes, and ovaries with the abdominal cavity and its contents, and

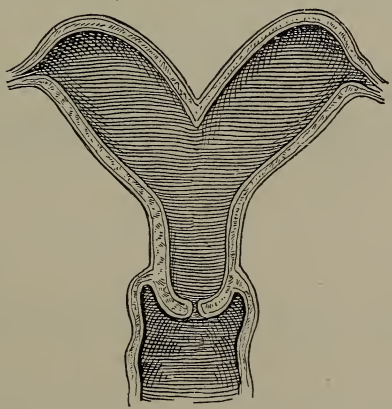


Fig. 56—Showing a cross section of a two horned uterus as illustrated in Fig. 55. (Ashton's Practice of Gynecology.)

the fact that there is a direct external communication with this cavity through the Fallopian tubes, it gives us the key to the important factors in the causes of diseases peculiar to woman. For example, gonorrhoeal,

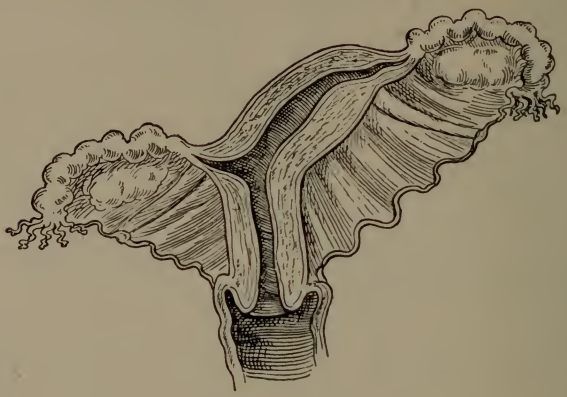


Fig. 57—Showing a sectional view of a one horned uterus. (Ashton's Practice of Gynecology.)

Fig. 58—Showing an infantile uterus that did not develop. (Ashton's Practice of Gynecology.)

tubercular, and other forms of infection may be deposited upon the vulva, in the vagina, or in the uterus and pass

directly through the Fallopian tube into the general abdominal cavity, causing an inflammatory condition which

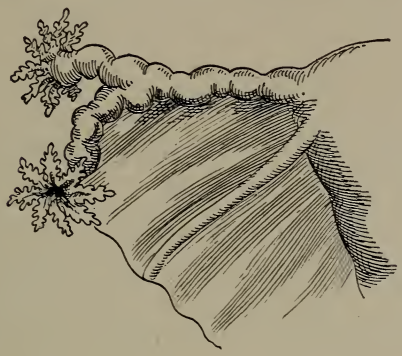


Fig. 59—Showing accessory fallopian tubes. (Ashton's Practice of Gynecology.)

Fig. 60—Showing an abnormal condition of a fallopian tube with two openings. (Ashton's Practice of Gynecology.)

produces many chronic subjective symptoms and the destruction of the functional activity of the pelvic organs.

We will now consider those causes that produce female diseases over which the woman has more or less control and which she can prevent if she takes the proper precautions.

EDUCATION.

Mothers are too careless in regard to the manner in which they allow their daughters to be educated. Our modern system of education has a decidedly injurious effect upon the general and sexual strength of women. The close application to study in early youth concentrates the nervous energy in the brain and deprives the uterus and ovaries of their share at the time when these organs are undergoing an enormous development and preparing for the functions of womanhood and motherhood. Too little attention is paid to the physical development of girls just before, during, and after puberty. The general health is often impaired in the effort of parents to give their young girls a polished education. They pay no attention to regulating the amount or character of mental work to suit the health and temperament of the individual. A young girl's nature demands physical and mental rest. Goodell, in his splendid work, says, "In one word, it is to the present cramming and high-pressure system of education, together with its environment, that I attribute much of the menstrual derangements, the sterility, the absence of normal sexual conditions, the often lingering convales-

cence from the first labor, which is frequently the only one, and the very common inability to suckle their offspring. From this cause come most of my unmarried patients with nervous prostration and various uterine and ovarian symptoms,—unmarried often because they are not well enough to wed. If woman is to be thus stunted and deformed to meet the ambitious intellectual demands of the day, if her health must be sacrified upon the altar of her education, the time may come when, to renew the wornout stock of this Republic, it will be needful for our young men to make matrimonial excursions to lands where educational theories are unknown."

Everything should be done to develop the physical being of every girl if she is desired to enjoy good health. We request all mothers not to overdevelop the mental faculties of their daughters at the expense of proper physical development. In other words give them time to grow into true and perfect types of womanhood.

SOCIAL CONDITIONS.

Social gatherings beginning at a time when the girl should be at rest in bed have a very bad effect upon the nervous system, causing at times derangements of and great suffering in the pelvic organs that are not felt by those leading a more natural life. There is a marked difference between working women and women of the

higher grade of society as to the frequency of various pelvic diseases. The lower class has not the skillful medical attention during childbirth, and many cases of blood poison and torn conditions of the vaginal outlet and uterus are left unrepaired, while those living in the higher walks are able to afford the best attention. Yet their nervous condition has lowered their vitality to such an extent that they would be invalids if they received the same treatment as the poorer classes.

We often notice the poor women, who suffer with some pelvic trouble to which they pay but very little attention raising large families.

We are often asked, as physicians, why women are so delicate nowadays. We answer this question by saying, "The women of today have not the perfect physique that they had years ago and this is due to the mode of living and the improper care that the young girls are receiving at this time."

OCCUPATION.

This has its influence in causing pelvic diseases. Women who work in stores, factories, restaurants, and laundries, and are compelled to stand on the feet for hours at a time often suffer from uterine displacements. Especially is this true if they have given birth to one or two children. Women who run sewing machines are subject

to pelvic congestion, and the various occupations in which lifting is required cause a backward displacement and a prolapsed condition of the uterus. Women should guard against certain occupations which have a tendency to produce any of these conditions.

CIVILIZATION.

In women of the savage tribes the muscles have a great power of resistance. In these races the endurance of men and women is equal. As we ascend in the scale of intelligence and civilization, changing the outdoor life for the artificial indoor one, we find that among highly civilized peoples men have much more strength than women. Among savage races women receive very little injury to the soft parts of the reproductive organs during labor. In other words, they are seldom torn, as the children have small heads and consequently injuries and sickness because of confinement seldom, if ever, occur.

CARE DURING MENSTRUATION.

Care during menstruation has been quite thoroughly discussed in a previous chapter, but it might be well to note that the civilized woman, unlike her savage sister, does not realize the importance of physical and mental rest during the menstrual period. Many pelvic disorders are directly traceable to neglect, carelessness and impru-

dence upon her part. The average American woman subjects herself to all kinds of exposures during her periods. Often if menstruation interferes with her plans, she will check it with a cold vaginal douche or by taking a cold bath. Again, young girls, just beginning to menstruate are not kept at home during the flow, but are sent to school as usual and kept hard at work. This alone gives rise to many kinds of trouble. Many women become invalids by simply neglecting common sense precautions, because they will pay no attention to,—sometimes absolutely ignoring the demands of nature.

CONSTIPATION.

Constipation is the cause of many diseases peculiar to women. Constipated bowels interfere with circulation and produce congestion of the uterus and its appendages, —perhaps displacements which result in various uterine troubles. Absorption of the decomposed material in the bowels produces impure blood and destroys the general vitality of the system, manifesting itself by aches, neuralgic pains, and general indisposition. It often interferes with the heart's action and proper breathing. Irregularity in emptying the bladder has bad effects which are not, however, as serious as those of constipation. This subject is discussed in Chapter XVIII and should be carefully studied.

EXERCISE.

Women often neglect to keep the muscular system and the organs of the body in a normal condition. Young women possibly take more exercise in the way of outdoor sports than older women, and the latter possibly suffer more from irregular menstruation, neuralgic pains, and loss of appetite than the younger class. The importance of gymnasium work and outdoor exercise for every woman cannot be overestimated. Every case should be governed according to the requirements of the individual, as over-exercise or overwork is also apt to be followed by evil results. It hardly seems necessary to repeat the fact that women should not exercise during menstruation; neither should they dance or engage in either outdoor or indoor sports when nature demands mental and bodily rest. Many women are so situated that they cannot take outdoor exercise, but we have arranged for a series of indoor exercises that every woman should follow according to directions given in Chapter XXI.

FOOD.

The health of the entire body depends largely upon the character of the food and the manner in which it is assimilated. Errors in the selection of diet are among the frequent causes of female diseases. A perfect development and normal condition of the pelvic organs cannot

occur when a patient has poor blood or an exhausted nervous system. Women suffer from many sorts of pelvic troubles, chronic dyspepsia and constipation as a result of improper dieting. We have devoted one chapter to this subject and trust you will find it worthy of your consideration.

The wine drinking and overfeeding of women in our large cities, frequent visits to cafes after theatres and the indulgences of fashionable society have a marked influence upon the diseases of the female pelvis. Late dinners composed of drinks and indigestible foods have no place in the category of that which goes to make up a perfect body, and consequently women who indulge in them, sooner or later suffer from an undermined constitution and pelvic diseases.

DRESS.

When we consider the manner in which women dress, we find that the body is not properly protected from cold and dampness, that there is more or less constriction of the waist and at the same time traction upon the abdominal muscles. The surface of the skin becomes chilled, driving the blood to the internal parts and the pelvic organs become congested. Especially is this true during menstruation when the parts are naturally gorged with blood. Thin shoes with high heels, under-garments made so as to leave the neck, chest, arms, and lower extremities

unprotected, all produce serious results. Women who frequently wear light low-necked evening gowns suffer from pelvic disorders through exposure and sudden changes of temperature. The constriction of the abdominal muscles by tight lacing interferes with breathing, the

Fig. 61—Showing the results of a neglected tear at the opening of the vagina during childbirth. The rectum and bladder walls are protruding. (Gilliam's Practical Gynecology, copyright F. A. Davis Company.)

circulation of the liver, the position of the heart, the up and down movements of the abdomen and pelvic organs which are so essential to the normal action of the bowels and the circulation of the pelvis. Naturally the normal functions of all the organs are destroyed, as the uterus

and its appendages are crowded out of their normal position. While tight lacing is detrimental to the health of every woman, we do not condemn the wearing of corsets if they are properly made and applied, except by women whose occupation requires them to bend forward when in

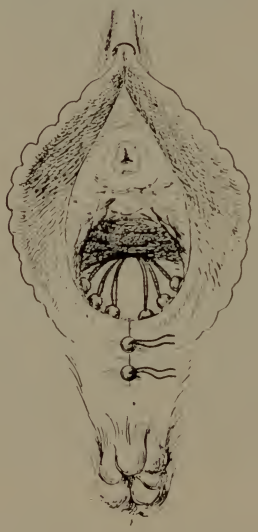


Fig. 62—Showing how the parts look after they have been repaired by surgical operation. A neglected case. (Ashton's Practice of Gynecology.)

a sitting position. Under such circumstances the corsets exert an injurious pressure upon the abdomen and crowd down the pelvic organs.

CHILDBIRTH.

Injuries resulting from labor are frequently the cause of pelvic diseases. Such tears destroy the strength of the support of the uterus and allow everything to sag down in

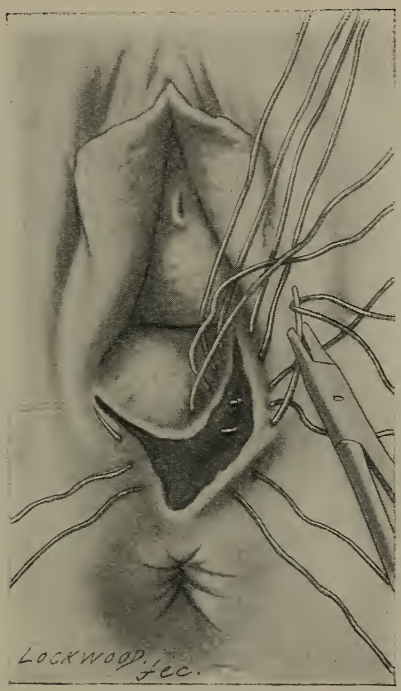


Fig. 63—Showing a recent tear extending up the vagina. Note the method of repair with the stitches in place. (Williams' Obstetrics.)

the vagina until the bladder and rectum often protrude, as illustrated in Fig. 61. Such lacerations prevent the proper contraction of the uterus and result in inflamma-

tion and displacements, and cases of long standing are often the cause of various diseased conditions. Any injury should be properly repaired as shown in Fig. 62. Tears of the cervix should be repaired as illustrated in

Fig. 64—Same as Fig. 63 with the stitches tied. (Williams' Obstetrics.)

Chapter I. The time to repair tears is when they occur. Figs. 63 and 64 illustrate how easily this is accomplished if performed at the time of the confinement.

Neglect in giving the proper treatment during and after confinement often results in displacement of the uterus to such an extent that the patient becomes an invalid. When the uterus is displaced backwards, Fig. 65, standing or walking is very difficult, sometimes impos-

Fig. 65—Showing a backward displacement of the uterus. Notice how the body of uterus is pressing against the rectum. (Gilliam's Text-book of Practical Gynecology, copyright F. A. Davis Company.)

sible. There is backache, headache, and often a burning sensation at the nape of the neck. The bowels become constipated, which is due to pressure upon the rectum. The bladder ofttimes is irritated and the patient has but

little control of the urine. Profuse leucorrhoea (whites) arises. Menstruation is profuse and painful. The cure for this condition as a rule is an operation. Sometimes treatments, uterine supports, and the knee-chest position, Fig. 66, will give temporary relief. If your physician

Fig. 66—Showing the correct attitude for taking the knee-chest position. (Ashton's Practice of Gynecology.)

orders you to take this exercise, follow these directions: Incline the body forward until the breasts rest upon the table or bed; turn the head to one side; let the arms extend over the head or at the sides. An important point is to have the thighs straight up and down. The best time to take this exercise is just before retiring. You should stay in this position five to fifteen minutes and immediately lie down. Do not stand on the feet again. This

position takes all the weight off the uterus by allowing it to drop away from the back, and for the time being often gives great relief.

When the uterus is tipped forward and rests upon the bladder, Fig. 67, it causes painful menstruation, sterility, and nervousness. The menstrual flow is generally clotty and is followed by a profuse leucorrhoea. Surgical inter-

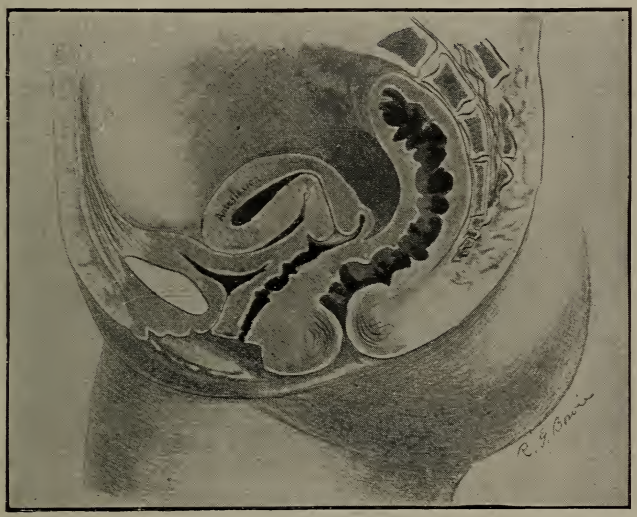


Fig. 67—Showing a forward displacement of the uterus. Note in this case how the uterus is resting on the bladder. (Gilliam's Text-book of Practical Gynecology, copyright F. A. Davis Company.)

ference is sometimes necessary to effect a cure.

The longer displacements of the uterus remain without treatments, the more difficult they are to cure. The effect upon the general health is very severe. The rem-

edy must often be a major surgical operation. Fig. 68 illustrates a case of seven years' duration. When we operated upon the patient we found the uterus grown fast to the back. It had become infected and the inflammation extended to the tubes and ovaries. An abscess formed,—one of the kind commonly called a "pus tube." It continually discharged through the uterus and it so undermined the patient's health that she was a semi-invalid. The only way to effect a cure was a surgical operation. This case is mentioned only to remind the reader how important it is to keep the pelvic organs in a normal condition.

In conclusion, we might mention that marriage, abortions, and venereal diseases all have their influence, and each subject is fully considered under an appropriate chapter.

Fig. 68—Showing the exact size of a fallopian tube and ovary at the time of operation. Both were filled with pus. (The author's case.)

CHAPTER XI.

SYPHILIS.

Definition.—Syphilis is known as a blood disease, characterized by a sore (chancre is the medical term), which is the first appearance of the syphilitic poison. The poison of syphilis enters the system and causes the chancre to form, and every case of syphilis contracted after birth must have a chancre which shows the place where the poison entered the system. It is a chronic disease. The poison enters the blood, causes a copper-colored rash to form on the body, and as the disease advances there is some throat trouble. The rash and sore throat occur after the chancre gets well.

HOW A WOMAN BECOMES INFECTED WITH SYPHILIS.

Two conditions are necessary in order to become inoculated with syphilis. First, there must be an abrasion (a break in the skin) at the point where the infection takes place. Second, the secretions containing the syphilitic poison must come in contact with the abrasion of the skin. These secretions are found in the discharge from a chancre in another person, mucous patches in the mouth, or from a syphilitic sore on any

part of the body. A healthy woman may have connection with a man that has a chancre on his penis and she will not get syphilis if there are no broken places in the skin on the vulva or in the vagina. She may become pregnant and the child will be infected from the syphilitic father and as it grows in the uterus the poison passes from the

Fig. 69—Showing a syphilitic sore on the lip.

child to the mother through the afterbirth. In this case neither the mother or the child has a chancre.

A woman may be infected by personal contact by having connection or kissing. A wet nurse may be infected by a syphilitic child. Any article, as a spoon, drinking cup, dental or surgical instruments, undercloth-ing, or a bathing suit that has been infected with poison from syphilitic lesions of other persons will convey syphilis.

LOCATION AND CHARACTER OF THE CHANCRE.

The sore or chancre is always located at the point of infection. Chancres appear most frequently on the genitals, but may be on the lips, tongue, breast, or fingers. Figs. 69 and 70. The chancre of syphilis is very hard and heals very slowly without leaving a scar. It is not painful. It develops in about three weeks after infection takes place. There is only one sore; if more,

Fig. 70—Showing a syphilitic sore on the cervix.

they all begin at the same time. The discharge is very scanty.

COURSE OF THE DISEASE.

In about three or four weeks after the poison enters the broken place on the skin a chancre appears at that point, infection slowly works its way into the blood and it becomes saturated with the poison. When this occurs a rash appears on the skin, Fig. 71, and remains from four to six weeks, then clears up, leaving copper-colored

spots. No symptoms are noticed until the poison which is in the system increases and causes a relapse to occur, the blood being again saturated with the infection. These relapses occur from four to six months during the course

Fig. 71—Showing a syphilitic rash on the body three weeks after the appearance of the chancre.

of the disease. When cases are under treatment relapses do not usually occur after the first year. After a period of many years with no appearance of the disease, new symptoms may again develop. As a rule this late appearance of the disease is very serious and causes great destruction of tissue.

A regular course of syphilis is divided into three stages:

First Stage. This includes the time from the moment the poison enters the system until the rash appears and there is a general outbreak of the symptoms (mucous patches, loss of hair, etc.). This period lasts from three to four months. The chancre is formed at the end of three weeks after the infection occurs and is generally cured by the time the general symptoms occur. During the first stage there is nothing to indicate that a person has syphilis.

Second Stage. This stage begins when the rash and sore throat and mucous patches appear and the hair also comes out. At times these conditions improve, then they get worse and so on during the first year of the disease.

Third Stage. Tumors due to syphilis form at this stage; they may occur in any organ or part of the body and they come on after the second stage has subsided for some time. However, the third stage may never occur if the patient has had treatment from the beginning of the disease.

HOW SYPHILIS ACTS UPON THE SYSTEM DURING SECOND STAGE.

In the second stage syphilis causes—

1. Fever; more in weak patients than strong ones.

2. More or less pain in the regions of the arms, legs, and ribs, at night.

3. Disease of the liver, which may give rise to yellow jaundice.

4. Slight inflammation of the kidneys.

5. Sore patches on the mucous membrane of the mouth, entrance to the vagina, etc.

6. Falling of the hair to a greater or less degree.

7. Rash on the skin, which varies in different individuals. It is not so marked in women as men.

SPECIAL CONSIDERATIONS.

If a person who has consumption, or one who is weakened from any disease, contracts syphilis, he will have a rapid breakdown of tissue and the case will terminate fatally in a very short time. Death may result from destruction of some vital organ.

If a case of syphilis is not treated and the patient is robust and can stand the drain on the system for two years, such a patient may not die, but will be in a weak condition and possibly an invalid for life.

If a person has syphilis once he will not contract it again. The attack makes the patient immune as in all other infectious diseases.

If the father and mother both have syphilis, the child will nearly always suffer from a serious type of

the disease. Death is the usual result. If the mother has syphilis and the father is healthy, the child is almost sure to be infected. If the father has syphilis and the mother is healthy, the child may escape infection.

If a healthy mother becomes pregnant with a syphilitic child (infected by the father) it will affect the mother in one of three ways:

1. The mother does not become infected, nor is she immune from syphilis; she may take it from nursing her child or from other sources.

2. The poison may pass through the afterbirth directly into the mother's blood and in this way the mother is infected. This is known as "syphilis by conception."

3. In this class of cases the mother does not become infected, but she becomes immune from syphilis and her child cannot infect her, nor will she acquire the disease in any other way.

If pregnancy takes place in a syphilitic mother, generally—

The first pregnancy ends in an abortion about the second or third month.

The second is a premature birth of a syphilitic child which dies.

The third goes to full term, but the child at birth shows signs of the second stage of syphilis.

The fourth goes to full term and the child shows no signs of syphilis at birth, but they develop later.

The fifth child is normal and remains healthy, has no signs of infection and is perfectly free from syphilis.

The value of careful and efficient treatment cannot be overestimated. All syphilitic patients should place themselves under the care of a physician and continue the treatment for two years at least. Mild cases demand this; severe ones require more time to effect a cure.

SYPHILIS AND MARRIAGE.

It is a difficult problem to state any time that it is safe for a syphilitic woman or man to get married, for when the disease is acquired there is no positive proof that the individual is free from it.

We may conclude from the observations of the best physicians:

1. That a woman or man with syphilis should not marry until four or five years after the date of the first infection.

2. That no person with syphilis should ever get married unless he or she has been treated for at least two years.

3. That he or she should not marry if there are any

signs of the disease, no matter how long it may be since the first infection.

4. That marriage should not be permitted until two years have elapsed since any signs of the disease could be detected.

CHAPTER XII.

GONORRHOEA.

Definition.—Gonorrhoea is an acute specific, highly infectious, catarrhal inflammation of the genitals. It spreads rapidly and often involves the vulva, vagina, urethra, uterus, tubes and ovaries. It is characterized by a discharge which contains pus of a slight greenish-yellow color, and the germs causing the disease.

THE INFECTION.

The vagina, vulva, and urethra may or may not be infected at the same time. Gonorrhoea has a tendency to spread rapidly and to attack not only all the regenerative organs, but the glands in the groin as well. The diseased glands often undergo suppuration and abscesses are formed. The tubes and ovaries and the membrane which lines the abdominal cavity may be involved. Gonorrhoea is caused by the Gonococcus of Neisser, Fig. 72. It is from four to seven days after a woman becomes infected before she has any symptoms; in rare cases it may be as late as fourteen days. Women are infected with gonorrhoea by sexual intercourse, by examination with infected instruments, or by the use of an infected

douche tip. To say positively that a woman has gonorrhoea, the discharge must be examined with a microscope to see if the gonococcus is present.

ACUTE FORM.

Gonorrhoea begins to spread as soon as any part becomes infected. In favorable cases it does not affect the uterus, but the pelvic organs are so often involved that the disease is one of the most dangerous which attacks

Fig. 72—The Gonococci germs which cause the inflammation.

a woman. If the urethra is infected, which is usually the case, there is at first a light sticky discharge and stinging sensation on urinating. This will last a few days, then the discharge increases and the pain when urinating is more severe, the glands in the groins become enlarged, inflamed and tender to the touch. As the disease advances there is a feeling of fullness in the pelvis, backache, more or less stomach trouble and much nervousness. Exercise of any kind will make the condition worse. Under proper treatment and care the above symptoms subside in two or three weeks and the patient makes a

complete recovery. If the inside of the uterus becomes involved and the tubes and ovaries become infected, the disease takes on the chronic form.

CHRONIC GONORRHOEA.

The acute symptoms subside and are generally replaced by pains in sides, headache, a general tired feeling, itching of the vulva, perhaps chills and fever; the general health is more or less affected because of the drain upon the system, loss of sleep and mental worry over the local condition. Menstruation generally brings on the acute stage for the time being. This chronic form may last for months, the infection slowly acting upon the uterus, tubes, and ovaries, causing a discharge from the uterus as illustrated in Fig. 73, and putting the affected parts in such a diseased condition that they must often be removed by operation when they cannot be cured by treatments.

REMARKS.

Gonorrhoea is the cause of a large majority of those grave pelvic troubles which result in sterility, chronic invalidism, and often a loss of life. Chronic gonorrhoea is frequent in both sexes and the disease may remain quiet for years, but still retain its power to infect another person. Many young wives are infected by husbands who have not had gonorrhoea for months or years before mar-

riage and who are unconscious of any local trouble. No. man who has had gonorrhoea should get married until the gleety discharge has been absolutely cured. He should be deterred by the thought that he may make his

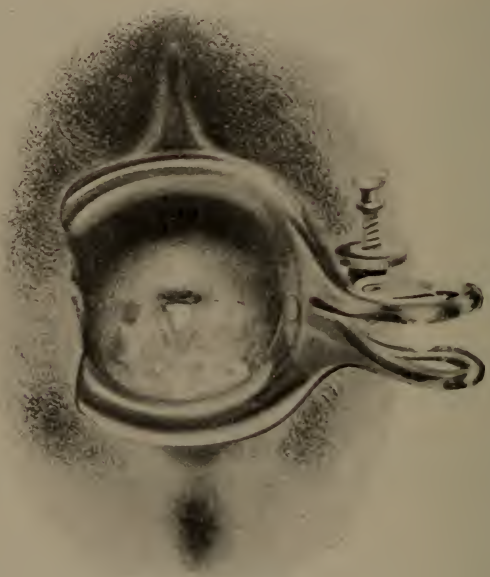


Fig. 73—Showing the discharge from a uterus which is infected with gonorrhoea.

wife subject to incurable uterine catarrh and a chronic inflammation of the tubes and ovaries which makes a surgical operation necessary, Fig. 68, Chapter X.

If a woman is infected by a man who had gonorrhoea years before, there are no acute symptoms, but the chronic

condition slowly develops. Sore eyes of a purulent nature in the children of a family always lead the physician to think of gonorrhoeal infection, as the germs of the disease can be carried to children on fingers, sponges, towels, etc. If a girl baby or child has gonorrhoea of the vulva or vagina the same diseased condition is generally found in the mother or other female members of the family.

Gonorrhoeal infection of the vulva may occur as an epidemic among children living together in orphan asylums, boarding schools, or like institutions, although the hymen prevents infection of the vagina to some extent. Gonorrhoea occuring in a child as the result of rape or accidental infection may cause an arrest in the development of the genital organs.

Women who become infected with gonorrhoea should have the best medical attention and not allow the disease to continue unchecked until the entire pelvic organs are affected.

The patient is not cured if any gonococci can be found by repeated examination of the discharge with a microscope.

This is an age of education for women and they are learning that "Woman pays for the sins of man." Ten to twenty per cent. of the blindness in babies is due to gonorrhoea and syphilis. Fifty to ninety per cent. of the inflammatory diseases of the pelvis which lead to the

operating table may be traced to the same source. More deaths are caused by gonorrhoea or syphilis than by smallpox, yellow fever, diphtheria, scarlet fever and measles combined.

The legislature of Iowa at the present time is being prevailed upon by the women of the state to pass rigid laws regarding cases of gonorrhoea and syphilis. Each patient is to be isolated and quarantined. If every state in the Union would protect its women by stringent quarantine acts, gonorrhoea and syphilis would soon be under control, if not altogether extinct.

CHAPTER XIII.

VENEREAL WARTS.

A very common infection that is closely associated with gonorrhoea and syphilis is Venereal Warts, Fig. 74. They are generally located on the vulva, but in some cases they are found about the anus; also between the vulva and anus, and may extend up into the urethra and vagina.

CAUSE.

They are caused by some irritating discharge, generally considered of a specific nature. Sometimes other conditions will cause them, such as continual irritation; ofttimes it is difficult to tell the real cause, as they occur when a woman has never had gonorrhoea or syphilis.

REMARKS.

When the warts are located in the urethra they cause painful urination. They are generally accompanied by an acid discharge which has a fetid odor and a tendency to spread the disease. If for any reason warts develop on the vulva, such a patient should consult a physician at once and have the proper medical or surgical treatment prescribed. If a woman becomes infected with such growths she should keep the parts clean and dry and wash

out the vagina quite often. Hot applications are beneficial and should be applied in the form of cloths wrung

Fig. 74—Showing venereal warts of the vulva caused by gonorrhoea. (Gilliam's Practical Gynecology, copyright F. A. Davis Company.)

out in hot water and placed on the vulva several times a day.

CHAPTER XIV.

LEUCORRHOEA.

(The Whites)

Definition.—The word leucorrhoea means a white flow and is used in medicine to designate any discharge from the genitals except blood. The laity calls the discharge "the whites." The genital tract (that part of the parturient canal extending from the top of the uterus to the external opening of the vagina), should be just moist enough to be soft and slippery, there being no discharge of any kind. Not even a drop of fluid should be visible. When a woman has leucorrhoea it is generally a symptom of some diseased condition, as leucorrhoea cannot be considered a disease in the true sense of the word. It is characterized by a white, yellow, green or brown discharge, or it may be colorless like the white of an egg, Fig. 75.

CAUSE.

Leucorrhoea is caused by any condition that lowers the general vitality of the system, as mental or physical fatigue, emotions, lack of nourishment, or too long nursing of children by mothers. The discharge may be

caused by various kinds of irritation, masturbation, excessive intercourse, childbirth, and abortions.

Gonorrhoea is also a cause of vaginal discharges and in this case the leucorrhoea is called specific. Any constitutional disease, such as consumption, fevers, rheuma-

Fig. 75—Showing a leucorrhoeal discharge from the cervix. (Modified from Massey's Gynecology.)

tism, or any local diseases of the pelvic organs will cause leucorrhoea—also displacements of the uterus.

SYMPTOMS.

Leucorrhoea is a drain on the system and women

with a vaginal discharge complain of a general weakness, backache and neuralgia. Such patients often have an irritable bladder or some stomach trouble. They do not sleep well. They also suffer from the diseases which cause the discharge.

TREATMENT.

As leucorrhoea is generally a symptom of some underlying disease the treatment must be directed to the cause, and in severe cases a physician should be consulted. In simple cases a hot vaginal douche (Chapter XV) may be taken in the morning and a medicated one at bed-time in the proportions of one or two teaspoonfuls of the following powder to a pint of water. Use at least two quarts of water.

Copy this prescription and have it filled by your druggist:

Powdered Alum	2 ounces
Powdered Boracic Acid	2 ounces
Powdered Sodium Bicarbonate	2 ounces
Acid Carbolic	20 drops
Oil Gaultheria	4 drops

Mix the carbolic acid with the oil and add the powders. Take the douche as directed in Chapter XV. No other treatment of any kind should be attempted by the woman herself. A patient who suffers from an excessive discharge from the vagina should consult a physician.

CHAPTER XV.

THE VAGINAL DOUCHE.

The vaginal douche is a valuable agent in the treatment of diseases of the pelvis and vagina. It is often ordered by the physician and frequently used by the patient, yet there are few women who understand how to obtain the best results by its application. As a rule the physician does not give sufficient instructions to his patient; therefore we will consider the subject quite carefully.

ARTICLES REQUIRED.

1. Bath thermometer, Fig 76.
2. Reservoir (a) Fig. 77, or fountain syringe, Fig. 78.
3. Glass douche tip (b) Fig. 77.)
4. Douche pan (c) Fig. 77, or Kelly pad, Fig. 79.
5. A bucket or slop jar for the overflow.

Every woman should supply herself with these articles. They can be obtained at any surgical instrument house or from a druggist.

The reservoir is made of granite with a spout for attaching rubber tubing and should hold at least one gallon of water.

The glass vaginal douche tip has openings in the end and is attached to the rubber tubing. It is best to use a glass douche tip as it is easy to keep clean.

The douche pan is made of metal and should have a rubber tube attached to carry the overflow into the bucket or slop jar.

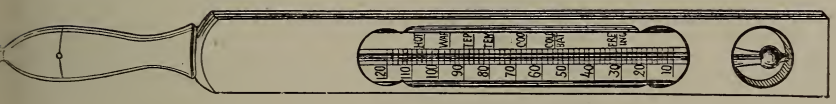


Fig. 76—Bath thermometer. Ashton's Practice of Gynecology.)

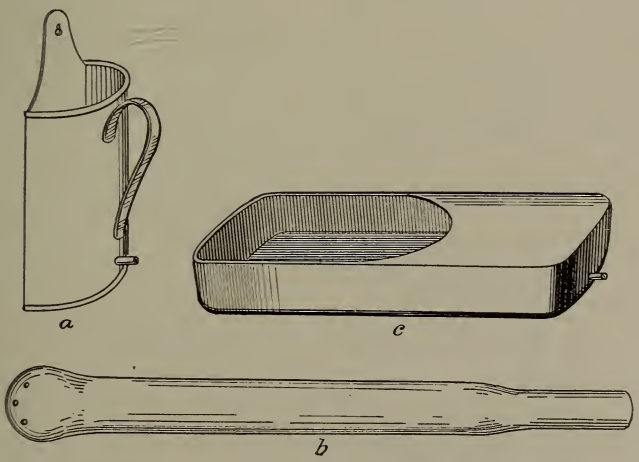


Fig. 77—a,—reservoir; b,—glass douche tip; c,—douche pan. (Ashton's Practice of Gynecology.)

The Kelly pad is made of rubber and is used in place of the douche pan. It has a hollow rim which is inflated with air by blowing through a valve. If a woman has not a Kelly pad she can make a substitute as illustrated in

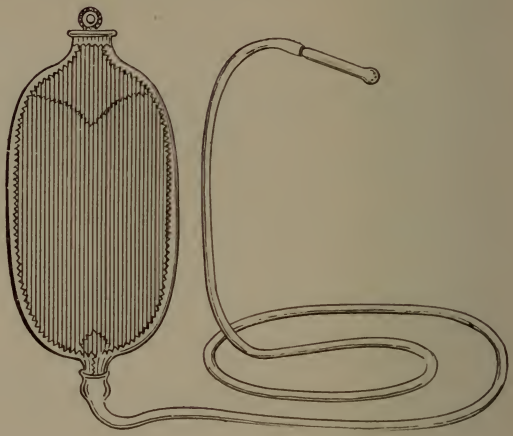


Fig. 78—A fountain syringe with a glass vaginal douche tip attached. (Ashton's Practice of Gynecology.)

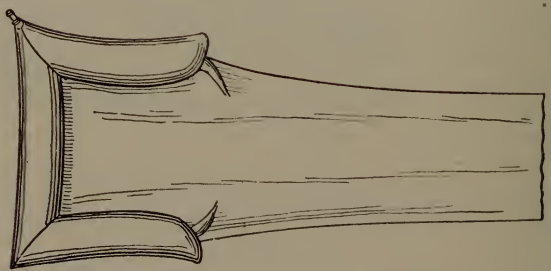


Fig. 79—A Kelly pad. (Ashton's Practice of Gynecology.)

Fig. 80. Make a roll out of a Turkish towel placing it in the form of a half circle and covering it over with a sheet of rubber oilcloth like that used on kitchen tables.

KINDS OF DOUCHES.

Hot, warm, medicated, and cleansing are the four kinds of douches to be considered.

1. A hot douche is given to stop inflammation, that is, to keep the blood away from the pelvis, and the temperature of the water should be about 120 degrees.

2. A warm douche is used to bring the blood to the pelvis and in this case the temperature is only 95 degrees.

3. The medicated douche is employed in treating some diseased condition of the vagina or cervix. Your physician will prescribe the kind and amount of medicine to use.

4. The cleansing douche is used simply for the purpose of cleanliness. The temperature of the medicated and cleansing should be the same as for the warm douche.

DURATION OF THE DOUCHE.

Hot douche, thirty minutes. Warm douche, twenty minutes. Medicated douche, ten minutes. Cleansing douche requires only a few minutes, as generally only two quarts of water are used at a time.

TIME.

The most convenient time is before dressing in the morning or just before retiring in the evening. As a general rule patients are required to take a douche only

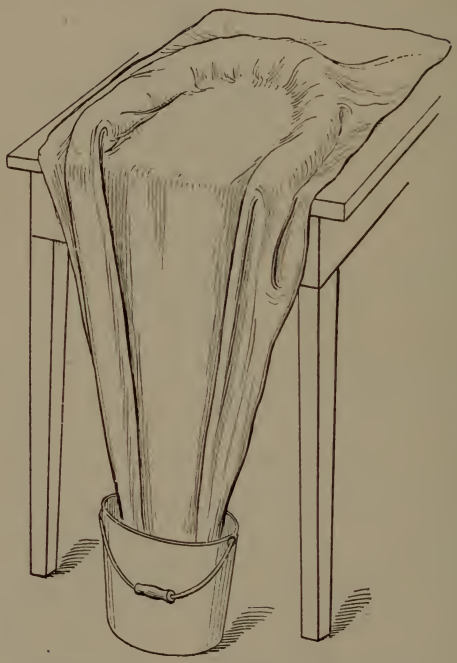


Fig. 80—Ashton's substitute for the Kelly pad. (Ashton's Practice of Gynecology.

at these periods, but they must be governed according to instructions of the physician. Some cases may require the douche every three hours and others only once a day.

The cleansing douche is taken only as needed, from once a day to every two or three days.

POSITION OF THE PATIENT.

In all cases it is best for the patient to take a douche lying down so that the vaginal walls become distended

Fig. 81—Showing the different conditions of the vagina when taking a douche. a,—correct position; vagina distended with water. b,—incorrect position; vaginal walls collapsed and touching each other. (Ashton's Practice of Gynecology.)

as shown in (a) Fig. 81. The cleansing douche can be taken in a squatting position as shown in Fig. 84, but in

Fig. 82—This shows the correct position for taking a vaginal douche. The patient is lying down and the vaginal walls are distended as illustrated in Fig. 81,—a.

Fig. 83—Using a Kelly pad instead of a douche pan while taking a vaginal douche.

this case the vaginal walls are collapsed and touch each other as illustrated in (b) Fig. 81. The hot, warm, and medicated douche must always be taken lying down as illustrated in Figs. 82 or 83, which show the correct position.

PROPER WAY TO TAKE A VAGINAL DOUCHE.

If possible a woman should use a cot or sofa with springs so stiff that there is but little sagging. If this is not at hand, take an ironing board and place it lengthwise in the bed or on a lounge and use douche pan, (c) Fig. 77. The patient must be lying lengthwise on the back with the hips raised on the douche pan. In this position the water will come in direct contact with the pelvic organs. If the douche be taken in a squatting position over a vessel, Fig. 84, the water does not reach the upper part of the vagina, and the effect of the douche is not obtained. If the Kelly pad is used, it is best to place the ironing board across the bed and let the feet rest on chairs. In all cases the reservoir or fountain syringe should be placed about four feet above the bed. A rubber tube should connect the outflow of the bedpan with the slop jar or bucket. If the patient has neither a douche pan nor a Kelly pad, she must use the substitute for same, as illustrated in Fig. 80. Often it is convenient for a woman to take a douche in the bathtub; in this case

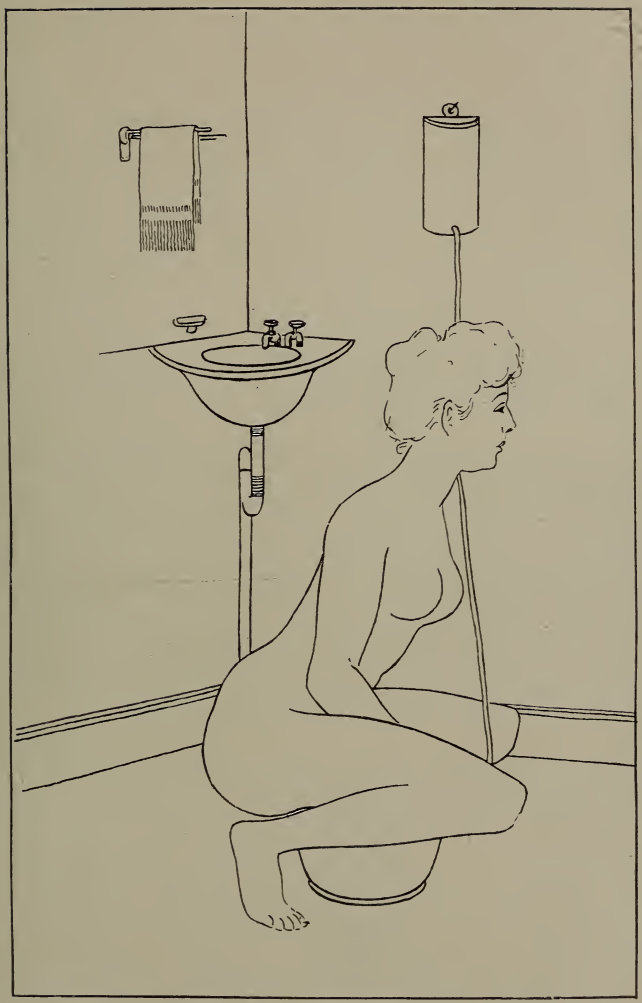


Fig. 84—Showing patient squatting while taking a vaginal douche. This is wrong, as the vagina is collapsed as illustrated in Fig. 81,—b.

neither a douche pan nor Kelly pad need be used, but the hips should be elevated on a Turkish towel folded about the same thickness as the douche pan. To prevent catching cold, a woolen blanket is placed over the abdomen and lower extremities. Let the water flow very slowly. It is a good plan to close the vaginal opening around the glass douche tip by pinching the parts together with the thumb and finger; at the same time stop the flow with the other hand and retain the water a few seconds. Remember, the douche point should be inserted into the vagina only a short distance as illustrated in (a) Fig. 81.

These instructions are to be followed in taking a hot or warm douche. In the medicated form always take a plain sterile (water which has been boiled) douche before using the medicated; this will wash away all discharges. If a poisonous drug is used in the medicated douche, a final sterile douche should be taken to wash out the medicine, to prevent any absorption of the poison.

The same appliances are used and the same instructions followed whether a trained nurse gives the douche or it is taken by the patient herself. The only exception is when a woman takes a cleansing douche herself. In this case the reservoir (generally a fountain syringe) is suspended about four feet above the floor and the douche is taken squatting over a vessel as illustrated in Fig. 84. If a cleansing douche is given by a trained nurse, it is

given the same as a hot or warm one only not so much water used.

In any case where there is excessive discharge and only a cleansing douche is required, follow the same instructions as for a hot or warm douche, only use more water and let flow freely, using no glass douche tip. Simply place the rubber tubing in the vagina a short distance, pinch the parts close around the tube, then let the water go out with a gush. This will bring the vaginal wall on a stretch and dislodge all secretions from the vagina, also all discharges from the uterus. The act of closing the parts around the tube and then releasing should be done several times while taking the douche.

Never take a douche with cold water because it will cause serious inflammation. Do not allow anyone to use your douche tip or fountain syringe, because there is great danger of carrying infection and disease by so doing.

CHAPTER XVI.

HOW SURGICAL OPERATIONS AFFECT A WOMAN WHEN THE TUBES AND OVARIES ARE REMOVED.

The general impression among the laity is that the removal of the tubes and ovaries causes a woman to lose her feminine attractions. However, this is not true. There is no tendency whatever toward the development of the masculine type. There is no change in the voice, nor is the figure altered in any way. In some cases there is a tendency for a patient to become fat.

The relief from pain as a result of such operations causes a large majority of women to become more attractive in their general appearance, and the general health of the patient gradually improves. In some cases when the tubes and ovaries have been diseased for years, the damage done in the pelvis is often so extensive and the patient so weakened that perfect health cannot be restored. Yet, in most cases of long standing the removal of the diseased tubes and ovaries will change the state of invalidism to comparative health and usefulness.

In most acute cases the relief from pain is immediate and the patient regains her normal health within a

few weeks after the operation. The removal of only one tube or ovary does not affect the patient in any way. When both tubes and ovaries are removed, the menopause (Chapter IX) appears and the patient has all of the symptoms which would naturally appear at that time. The full benefit of the operation is not obtained until these symptoms have subsided.

Surgical operation is not the primary cause of insanity. More often an operation prevents it. If a patient does go insane after the removal of the tubes and ovaries, there is always existing an inherited tendency to insanity and the change of life is a direct cause of a mental break-down. With the loss of the tubes and ovaries a woman loses the power to become pregnant. Some women worry over this fact and become despondent, especially if the operation occurs early in life, because they are anxious to have children.

If for any reason the tubes and ovaries should be removed before a girl menstruates her sexual development will be arrested.

The effect upon the sexual appetite does not differ from that of the normal menopause. In a large majority of cases it increases because the woman regains her health and has no more tenderness in the pelvis.

CHAPTER XVII.

MASTURBATION.

By the term masturbation or self abuse, we mean the gratification of the sexual passion by the use of the hand or any foreign body on oneself or another person. The most common form of masturbation in women consists in irritating the clitoris with the hand or by an oval shaped body introduced into the vagina. Imperfect masturbation is often practiced by infants of either sex who have no idea what they are doing. They may be taught the habit by an unprofessional or unscrupulous nurse in order to keep them quiet, or perchance by accident they find that handling the genitals produces a pleasurable sensation. In childhood we find the habit more among boys than we do among girls, but later in life it occurs much more in women than in men. In infants we notice a reddened condition at the entrance of the vagina, also an over-secretion. Again, there are changes in the child, such as sudden redness of the face followed by paleness, twitching of the muscles, hurried breathing and deep sighs. These spells often come on when the child is sitting on the floor or rocking and when pressing the fists against the genitals. These attacks have a tendency to completely wreck the nervous system; therefore infants

and their nurses should be carefully watched. When such a condition is suspected it is well to consult a physician in order that he may immediately discover any irritation that may be present and prescribe the proper treatment. It is better for such a child to lie on a hard couch and not be covered too warmly. Rich and highly seasoned foods should be prohibited. During an attack the child should be taken up, her thighs separated, her hands removed from her abdomen and her mind diverted. In older children we find the external genitals in a condition that would result from continual irritation.

As to the general health, masturbation causes the nervous system to suffer more than any other in all its functions. It causes a general nervousness, destroys the mental faculties, causes pains in various parts of the body, paralysis and insanity. The nutrition is also impaired, there is loss in weight, the face becomes pale, the appetite poor, the bowels constipated, dark rings appear under the eyes and often there is inflammation of the bladder.

We beseech every young girl into whose hands this book may chance to fall to look with horror and disgust upon this crime, and we trust that she will remain pure and innocent and that she may realize the depths of degradation into which she will fall if she ever attempts to practice such an evil. It will simply ruin her health and

the life that is before her. Words cannot express the deplorable results of this detestable habit, and woe to the governess, nurse, or associate who teaches any innocent girl that which means her destruction. For she must be taught at first by someone. Mothers should have an eye upon their daughters and realize the fact that such a vice does exist, and use every effort to prevent it. We could say nothing better than to quote one of our eminent medical men. He says in part, "We could give facts almost without number, in reported cases, to show the prevalence and destructive nature of this vice among girls, but we forebear. The subject is painful and revolting even to contemplate. We believe we have said enough to terrify parents into the needful precautions against it. If so much has been accomplished, our object has been realized." We remark, however, in conclusion, that it is not sufficient to use merely ordinary precautions of a judicious watchfulness in suspected cases, but skillful questioning must from time to time be employed. The subject should never be avoided through false delicacy, and such lessons should be imparted on the dreadful consequences of the habit, that one who is a victim of such vice will stop it. It were far better, my good mother, to acquaint even pure minded and perfectly innocent girls with the existence of such a vice and teach them its horrible consequences than to fail through false modesty and

mistaken motives of delicacy to impart that information which may save the life and health of the purest and dearest creature on this earth, your daughter.

CHAPTER XVIII.

CONSTIPATION.

Many years ago an eminent physician defined woman as "a constipated biped with a pain in her back." This was unjust, but he was not far from right. He did not mention that the pain was due to constipation, but it very often is. The fact is that this complaint is almost universal among women and is the indirect cause of much of their suffering.

Definition:—Chronic constipation is the habitual prolonged retention of the contents of the lower bowel which naturally become hardened on account of the absorption of its liquid part. We are not permitted to say that it is a disease, but it is a symptom of some other trouble. The essential point is not so much how often the bowels move, but how long the contents of the bowels are retained. In most cases there is a marked infrequency of movement. In usual cases the normal length of time between movements of the bowels in adults is twenty-four hours.

CAUSES.

Chronic constipation is produced by various condi-

tions, some of a general and others of a local character. Among them are the habits of women who mingle largely in social circles, neglect to evacuate the bowels at the proper time, improper diet, insufficient amount of water, bodily inactivity, the ill-advised use of cathartics, backward displacement of the uterus, tumors, or any abnormal condition of the rectum.

1. **The Habits of Women Who Mingle Largely in Social Circles.**—In the upper classes we find sedentary habits and various chronic diseases, especially liver, stomach, nervous disorders, and often hysteria.

2. **Neglect of Evacuating the Bowels at the Proper Time.**—Worry or severe mental work which occupies a patient's attention to such an extent that she neglects to respond to the calls of nature is a well-known cause of chronic constipation.

3. **Improper Diet.**—There is a good deal of discussion among medical authorities as to what extent diet causes chronic constipation, but the weight of authority tells us that the diet which produces a small amount of residue will have a tendency to cause constipation.

4. **Insufficient Amount of Water.**—This is another very important cause of chronic constipation. It is surprising to note what a small amount of water, a fluid whose use is essential to good health, the majority of women will consume in twenty-four hours.

5. **Bodily Inactivity.**—This is due to sedentary habits and to dressing which destroys the proper movements of the diaphragm. Tight lacing results in flabby abdominal walls, which in turn produce poor muscular action of the bowels.

6. **Ill-advised Use of Cathartics.**—The ill-advised use of cathartics is frequently responsible for improper action of the bowels. As a rule when patients begin to be constipated they begin to take medicine. This is unfortunate, for the continuation of such remedies will in time destroy the proper tone of the muscles of the bowels. True, immediate relief is obtained, but as constipation and the other symptoms return, patients again resort to drugs for relief. Stronger doses and frequent changes of medicine are required from time to time. The patient soon finds that she is a slave to the medicine habit and that the bowels will not move without assistance.

A diseased condition of the nerves of the bowels, dyspepsia, displacement of the uterus, chronic inflammation of the lining membrane, and growths in the intestines which would in time form tumors will also cause constipation. Local conditions in and about the rectum, such as ulcers, tumors, and piles; fissures caused by cracking of the mucous membranes, strictures due to a contraction of the muscles about the rectum frequently result in chronic constipation.

EFFECTS.

The effect of constipation upon the system is very marked. The poison which is absorbed from the bowels causes headaches, depression of spirit, loss of appetite, bad breath, coated tongue and loss of weight. In women it also causes palpitation of the heart, cold hands and feet and neuralgic pains in various parts of the body. Women have suffered so commonly from this kind of poison and for so long a time that they use the words "biliousness" and "sick headache" to express this condition and to the laity it indicates some liver trouble. Investigation shows that the poisons which are formed in the intestines and absorbed while a patient is constipated produce these well known effects upon the system. The circulation of the poison through the system causes mental depression and destroys the intellect. No matter how gentle, benign, and hopeful a woman may be, chronic constipation will in time render her very irritable in temper and destroy her once pleasing manner.

It is interesting to note that the inmates in the asylums are generally constipated, and the depressed insane are promptly improved by a vigorous cathartic.

Prolonged constipation may result in piles (hemorrhoids), or an over-stretching of the bowels. The irritation of the hardened masses may cause the formation of ulcers.

The blood of a chronically constipated patient becomes very poor and as a result a breaking out occurs on the skin, also dark colored or brown spots appear on the face. If women wish to have a beautiful and clear complexion, there must be a normal condition of the stomach and bowels.

Chronic constipation destroys the vital forces of the body and lowers the power of resisting diseases to such an extent that the sufferer not only endures the direct bad effects but is susceptible to any disease with which she may come in contact.

TREATMENT.

Until a short time ago the medical profession paid but little if any attention to the curative treatment of chronic constipation, but it is gratifying to the sufferers from such conditions to note that science has made successful development along this line. Today we are practically masters of the situation. All uncomplicated cases that are due simply to inactivity of the muscles of the bowels can be cured. When the patient will not adhere strictly to the physician's orders she cannot be cured. To cure chronic constipation it is necessary to establish the habit of regularity in evacuating the bowels. A patient should go to the toilet every morning even if there is no desire for the bowels to move, and endeavor to cultivate

a stimulus to the bowels which will result in regularity. The medicine and enema habit acquired by women who are troubled with constipation will be mentioned simply to be condemned. It is astonishing to know the amount of cathartics which are used each year to simply make bad matters worse. One combination of drugs is tried until it has lost its effect, and then another, until the effect of each combination is worn out. These patients go, as a general rule, from one physician to another seeking relief, but too often they are given a prescription to relieve the present condition only, and are not improved in the end. Too little attention is paid to chronic constipation because patients do not consider it a serious detriment to their health.

To effect a cure in chronic constipation, the physician must first find out the cause and relieve it before he can ever hope for success. This requires a careful, diligent, and thorough examination and study of each individual case. If a woman has chronic constipation and expects to be cured, her case must be thoroughly studied and properly treated. As you will note, it may be due to one of several causes.

There are some things a patient can do to assist her physician. In the first place she must comply to a letter with his orders. She should take the proper exercise either outdoor or indoor, and eat suitable food. Now

if it were possible for a physician to prescribe a diet that would fill the bowels with undigested food, to produce stimulation in the bowels, the treatment would be ideal for simple uncomplicated cases, but this is impossible because such a diet would in a short time cause inflammation in the stomach and bowels. A suitable diet is of so much importance that all women who suffer with chronic constipation should select foods that will leave a large amount of residue in the bowels. At the same time it must be a diet that is nutritious and not irritating and one that suits the peculiarities of the individual. In order to instruct these sufferers as best we can in this article, we will mention a few rules of diet which will increase the amount of residue in the bowels.

Rule 1. Drink plenty of water and partake of juicy fruits and tuberous vegetables, such as beets, carrots, turnips, etc., as they contain large amounts of water. Masticate the food thoroughly. This will increase the amount of fluid. Cold water is beneficial taken one hour before meals and before bedtime, beginning with half a glass and increasing four ounces each day until one or two quarts are consumed every twenty-four hours. If there is any stomach trouble like indigestion drink hot water in place of cold.

Rule 2. See that there is a large amount of indigestible solid matter in the food, such as fruits and

cereals, that contain seeds and husks, also fibrous and woody materials. Lettuce, spinach, greens, watercress, celery, oatmeal or any coarse cereal are along this line. Whole wheat bread may be added.

Rule 3. Select foods which will cause gas to form in the bowels. In this class will be those articles of diet that contain starch, sugar and fat. Potatoes, molasses, honey, bacon, and fat meats form a very suitable diet to produce such a condition. The fat envelops the starch granules and they then decompose, forming gas; this increases the action of the bowels. Fat also lubricates the intestinal tract and allows the contents of the bowels to pass more freely.

Rule 4. Last but not least, we must add to the diet list something which will increase the flow of bile from the liver, and the flow of juices from the stomach and other organs of digestion. We have prunes, figs, dates, apricots, apples, peaches, oranges, lemons, grapes, pears, and quinces from which to select for this purpose. It is also claimed that olive oil and fats have the same effect. If such a diet as outlined above should cause either pains in the abdomen or diarrhoea, it should be discontinued. In some cases a fruit diet does well, but the fruit must be ripe and pure, as green or decayed fruit does much harm.

CHAPTER XIX.

THE ENEMA.

Definition.—By the term enema we mean the injection of plain or medicated water into the rectum and colon (the large bowel). In hospital practice it is termed the low and high enema.

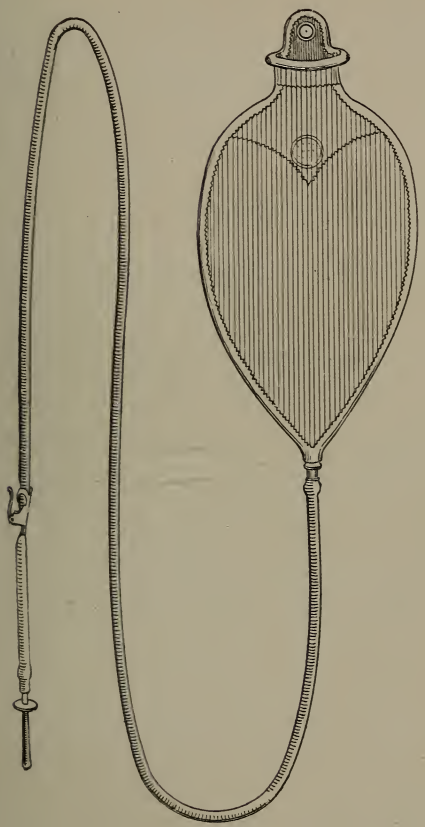
ARTICLES REQUIRED.

A fountain syringe, Fig. 85, or a reservoir, Fig. 77, a hard rubber syringe with rectal tube attached as in Fig. 90, and a rectal tip. Although a tip comes with all syringes the improved one designed by Dr. Ashton is of great value, Fig. 86. It is constructed with a large flange one inch in diameter. When the tip is inserted in the rectum the flange presses against the parts and prevents the instrument from going too high in the bowel, and helps to retain the fluid by stimulating the contracting muscles of the rectum.

USES.

The enema is used to give temporary relief in chronic constipation, to wash the poison caused by constipation out of the large bowel, to assist in preparing the general

system for surgical operation, and to increase the action of the liver and kidneys. It is used by some physicians



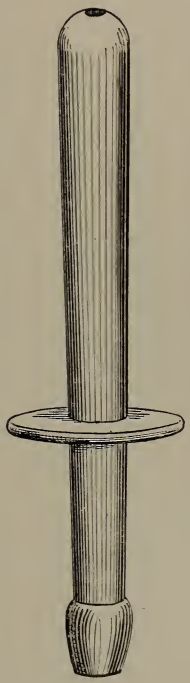


Fig. 85—A fountain syringe with rectal tip attached. (Ashton's Practice of Gynecology.)

Fig. 86—The best form of rectal tip used for washing out the large bowel. (Ashton's Practice of Gynecology.)

to reduce the temperature and cleanse the bowels in typhoid fever. It is valuable in shock after operation. Its daily use as a remedy for constipation is a practice as detrimental to the patient as the medicine habit. From a medical standpoint it is very useful and essential. The physician should order the kind of an enema according to the condition of the patient.

THE KIND OF ENEMATA.

1. **The Plain Enema.**—This is in general use by the laity. It is composed of a quart of water at a temperature of 100 degrees and enough castile soapsuds to make a colored solution.

2. **The Medicated Enema.**—When more stimulation is required, as in obstinate constipation, medicine is often added to the plain, thus:

(a) Castor oil or olive oil..... 1 ounce
Plain (100 degrees)..... 2 pints

or,

(b) Epsom Salts ..... 2 ounces
Glycerine ..... 2 ounces
Spirits of Turpentine ..... 1 teaspoonful
Hot water (100 degrees)..... 1 pint

(c) Often when prompt relief is necessary an ounce of glycerine is ordered injected into the rectum with a small hard rubber syringe.

(d) Six ounces of hot olive oil at a temperature of 110 degrees given high is also prescribed for obstinate constipation.

(e) One pint of milk of asafoetida is injected into the bowel when a great deal of gas in the bowels is associated with constipation, or after an operation. This may be given high.

(f) Another form of medicated enema is the normal salt solution. This is made by putting one teaspoonful of common table salt to each pint of water used. It is given hot, warm or cold and may be injected high or low as the case requires.

3. **The Hot Enema.**—This is given to increase the action of the heart or kidneys. It is given at a temperature of 110 to 120 degrees and is composed of water only.

4. **The Cold Enema.**—A cold enema is given in fevers and when a reaction is required. Cold water stimulates and tones the bowels, whereas hot water relaxes. The proper temperature for a cold enema is 60 to 70 degrees. Less water is used and it is not retained as long as is the warm or hot enema.

5. **The Warm Enema.**—This is composed of plain water and is given at a temperature of 90 to 95 degrees. It is generally prescribed immediately before giving a cold enema, as it increases its action, causing a decided reaction.

6. **The Nutritive Enema.**—When the stomach will not retain nourishment on account of a surgical operation or any diseased condition a nutritive enema is given. It should be given high at a temperature of 100 degrees, not more than three or four ounces at a time and not oftener than from four to eight hours. If more fluid is used it will not be retained.

The following formulas are generally used:

(a) Liquid Peptonoids ..... 1 ounce
Normal salt solution..... 3 ounces

(b) One raw egg
A little table salt
Whiskey .....½ ounce
Peptonized milk ..... 3 ounces

(c) One raw egg
Peptonized milk ..... 3 ounces
Beef juice ..... 1 ounce
A little table salt

HOW AN ENEMA SHOULD BE GIVEN.

Any form of enema may be given low or high except the glycerine alone. It should be given low. By the term low enema we mean that the enema is injected in the rectum. By the high enema we mean that the fluid is placed in the large bowel so that it traverses its entire length and reaches every part of the colon. This is some-

times called a colonic flushing and is accomplished by using the rectal tube, Fig. 90, instead of the tip. The rectal tube is slipped over the small rectal tip which comes with a fountain syringe. Your physician will give orders as to whether it should be high or low and the kind of enema to use, but for the purposes for which women generally use the enema there are some special instructions that will be of advantage. It may be that she must have an attendant or nurse to assist her, as it is somewhat awkward for a woman to follow alone the technique as herein described. When the patient is confined in bed the low enema is given with patient lying on her left side. After it is taken she should lie on her back for a few minutes and then turn over on the right side. This will give the water a tendency to gravitate around in the direction of the large bowel. The same position is used for the high enema when the patient is weak and in bed, but the rectal tube is used in the place of the tip. Even in health it is much better to take an enema this way than to take it sitting over the toilet. as is generally practiced. It should be retained as long as possible, but where a thorough cleansing of the bowels is required it is best, if the patient is strong enough, to take the enema in the knee-chest position. Hold the rectal tip, Fig. 86, which has been attached to the rubber tubing which is connected with a fountain syringe or

reservoir, as illustrated in Fig. 87. If it is desired to give the bowels a thorough cleansing the medicated enema of normal salt solution should be used. There should be from one to two quarts of this solution in the syringe which is hung about five feet from the floor. Unfasten

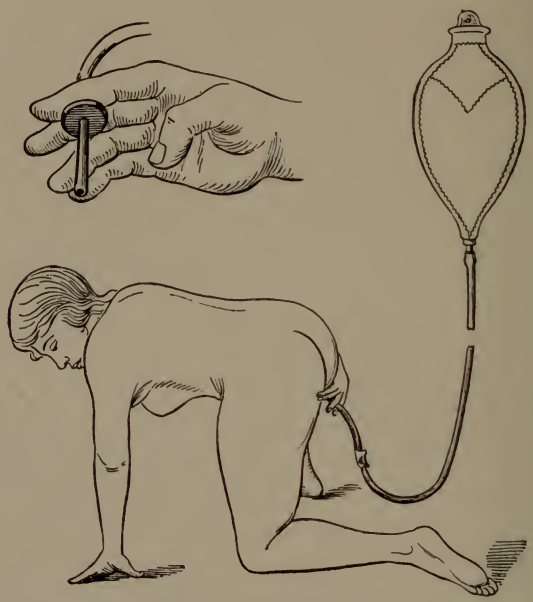


Fig. 87—Showing first position of the patient and how to hold the rectal tip. (Ashton's Practice of Gynecology.)

the clip and allow a small quantity of the solution to run out; this expels the air and allows the escape of the cold water which was in the rubber tube. Now fasten the tube and lubricate the tip with vaseline or soap and place in the rectum as shown in Fig. 87, with the patient

kneeling and in the position illustrated. When the solution begins to flow the tip is held firmly against the parts and the patient takes the position illustrated in Fig. 88. When the fluid begins to enter the rectum as a general rule there is a desire to expel it, but the patient should

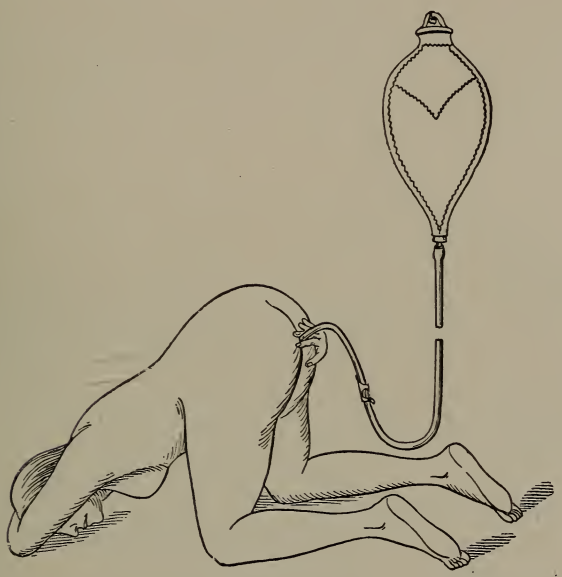


Fig. 88—Showing second position of the patient when taking an enema. (Ashton's Practice of Gynecology.)

make every effort to retain it. The tip should be pressed firmly against the parts. Patients can ofttimes hear a gurgling sound when the water passes farther up the bowel and then the solution will flow freely. When the syringe is empty the tip is withdrawn and the patient

rolls over on the right side, as illustrated in Fig. 89. When there is a pressing desire to empty the bowels the patient sits on the toilet or vessel or, if confined in bed, the bedpan, and there is a complete evacuation of the solution and poisonous material as well as the contents of the bowels. It does not take very long to accomplish this method of cleansing the bowels and it is very effective. If the patient is too weak to take the enema in the position mentioned, she should lie on the left side, have the

Fig. 89—Showing third position of the patient with large bowel filled with water. (Ashton's Practice of Gynecology.)

hips elevated, and use the rectal tube, placing the solution as high as possible in the bowel. Then take the same position as directed in the low enema.

In giving the nutritive enema a hard rubber syringe and a rectal tube, as illustrated in Fig. 90, should be used. The solution is drawn up into the syringe and enough force used to expel the air. The tube is inserted in the rectum a distance of ten to fourteen inches after being well oiled with sterile vaseline or olive oil. This enema

should be given high so that it can be absorbed by coming in contact with more of the bowel surface. The patient should be placed on the right side or in the knee-chest position in giving this enema. Before giving the nutritive enema a cleansing enema of normal salt solution or a plain

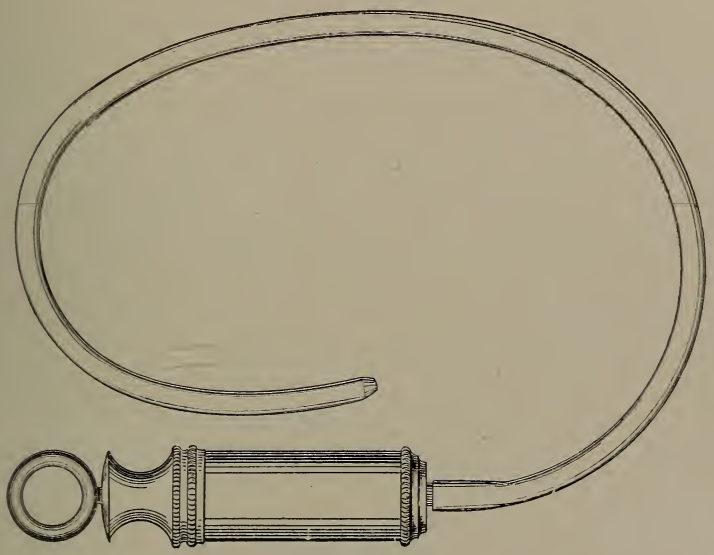


Fig. 90—A syringe and rectal tube used in giving a nutritive enema. (Ashton's Practice of Gynecology.)

enema should be given, and if the bowels will not retain the nutritive enema, ofttimes five or ten minims of tincture of opium is added to the mixture.

The enema composed of normal salt solutions is given for shock after operation. The rectal tube is used as

directed above and the solution is allowed to flow continuously a few drops at a time. This is known as the drop method.

Under the head of the different enemas the temperature and quantity of the various kinds have been given, and they should be referred to when giving an enema. It is safe for a woman to use the normal salt solution or the plain enema either low or high for the purpose of giving herself temporary relief in chronic constipation, but she should not attempt to administer any of the other forms unless so ordered by her physician or a professional nurse who may have charge of her.

CHAPTER XX.

DIET.

The subject of diet is one of great importance either in health or in disease, and it is impossible to give in one chapter an exhaustive treatise upon the different kinds of foods, their composition and uses. It is very essential that every woman should purchase some good book on the subject, as Freidenwald's "Diet in Health and Disease," and give it her careful attention, because the subject is so neglected and abused both in the profession and among the laity that it would require a volume to give a comprehensive discourse and specific directions in the matter of healthful food. Food-stuffs require careful study. Without going into any minute details in regard to the chemistry of them or the physiology of digestion, we will give a few fixed rules and diet lists which may be used as a reference when any special diet is ordered for a patient by the attending physician.

THE METHOD OF COOKING AND PREPARING FOOD.

The preparation and cooking of food-stuffs is prac-

ticed by all tribes, nations, and races, whether savage or civilized. Foods are cooked for the following reasons:

1. To improve their flavor.

2. To soften them so that they can be thoroughly masticated.

3. To destroy any infection or germs which may be present.

4. To make the chemical changes which assist digestion.

VEGETABLES.

The fact that vegetables are largely composed of starch granules makes cooking them a necessity. They should be put into boiling water and it should be kept at the same temperature. Salt in the proportion of one teaspoonful to two quarts of water should be added when the vegetables are partly cooked. Cabbage, cauliflower, onions, and turnips are best boiled under cover in a large amount of water, while fresh green vegetables require less. After they are drained, a seasoning of salt and pepper should be added to suit the taste. The following sauce makes them more palatable: Three tablespoonfuls of butter, three tablespoonfuls of flour, one teaspoonful of salt, white pepper, one cup of milk, and one cup of stock (water in which the boiling is done). Vegetables should not be cooked too rapidly. The following time-table is given by the Drexel Institute:

Potatoes	25-30 min.	Spinach	30-45 min.
Carrots	35-45 min.	Celery	20-30 min.
Turnips	45 min.	Parsnips	30-45 min.
Beets (young)	45 min.	Green peas	30-40 min.
Beets (old)	3-4 h'rs.	String beans	1-3 h'rs.
Tomatoes	1-3 h'rs.	Lima beans	1 hr. or more
Onions	45-60 min.	Green corn	12-20 min.
Cabbage	45-60 min.	Rice	20-45 min.
Cauliflower	20-30 min.	Macaroni	45-65 min.
Asparagus	20-30 min.		

CEREALS.

Cereals, and the gruels made from them, form a very valuable diet list for the sick and for patients who must have special food which is easily digested and at the same time very nutritious.

Cereals are best cooked in vessels which have a double boiler. The lower boiler, or compartment, should be filled about half full of water, and if additional water is required during the cooking it should always be boiling hot. The same proportions of water and salt given for vegetables should be used, adding the cereal gradually and stirring to prevent burning. It should be steamed until thoroughly cooked, and the water in the lower compartment kept at a boiling point. As a general rule, cereals are not given sufficient time to cook thoroughly. We might mention oatmeal as an example. It has a much better flavor and is more nutritious if it can be slowly cooked for three hours or more.

Cereals should be just thin enough to pour when taken out of the boiler, and when cool, should form a jelly-like substance. Any cereals which are cooked in the form of mush may be made into gruel by adding milk or cream. For serving to the sick, gruels should be hot, and neither too sweet nor too highly flavored. In some cases where patients require more nutrition, the whipped white of an egg may be added. Formulas for the most common gruels will be given under "Soft Diet." The following time-table is an excellent one:

Cornmeal mush: Boil 10 minutes, then steam 3 hours. or more.
Oatmeal: Boil 10 minutes, then steam 1½ hours or more.
Irish Oatmeal: Boil 10 minutes, then steam 8 hours or more.
Wheatena: Boil 10 minutes, then steam 1½ hours or more.
Gluten Mush: Boil 30 minutes.
Steamed Rice: Boil for one hour.
Boiled Rice: Boil for 20 minutes or until soft.

MEATS.

Only tender cuts of meats should be used, especially for the sick, and they should be pan-broiled or roasted. They should be placed in a hot oven at a high temperature, so that the outer surface will be seared and hardened to prevent the escape of nutrition; then the temperature should be lowered and the meat allowed to cook in its own juices.

Meats, to be properly boiled, should be placed in boiling water and allowed to boil a few minutes (10 or

15). Then the cooking should proceed slowly until the meat is tender. The water should not be allowed to bubble again. Tough meats treated in this manner will become tender.

The time required for cooking meats, either roasted in the oven or boiled, varies with the weight and quantity. The roast which weighs from eight to twelve pounds should be allowed twelve minutes to the pound and twelve minutes extra; if under eight pounds, ten minutes to the pound and ten minutes extra; if over twelve pounds, fifteen minutes to the pound and fifteen minutes extra. To boil meats weighing less than ten pounds, allow twenty minutes to the pound and twenty minutes extra.

The time required for broiling meats varies with the thickness. The proper method of cooking a steak is to have the frying-pan very hot, without grease. Cut the steak to the desired size, trim all the fat off, and place in the frying-pan. Sear the outer surface of one side, then turn it over and treat the opposite side in the same manner. Add a little salt and pepper and keep turning it from one side to the other, cooking it as desired, either rare, medium, or well done. For the sick, rare steak contains the greatest nutrition and is most easily digested. It should be placed on a hot plate,

buttered, and served while very hot. The average time required to cook a steak an inch thick is five minutes.

FRUITS.

Fruits are considered of very little nutritive value to the system. They are used mainly to give variety to the diet and as flavoring agents. Some contain a little starch, sugar, and a sort of fruit gelatine. As a rule, they contain a large amount of water and some acid which act as a stimulant to the kidneys and bowels. The flavor and odor of fruits is due to their essential oils.

Some varieties of fruit are easily digested in the raw state—among them oranges, lemons, grapes, and peaches. Raw apples, pears, and bananas are less digestible. Bananas obtained from the United States are claimed to be indigestible.

GENERAL RULES FOR PREPARING SOUPS.

In preparing soups and broths from meats and vegetables, the ingredients to be used should be cut in very small pieces and put in cold water. Allow the mixture to simmer slowly so that the nutrition of the meats and vegetables will be dissolved and become a part of the liquid. Cook in this way for several hours. Allow to cool uncovered, and when cold the fat can be easily removed with a cloth that has been dipped in boiling

water and then wrung dry. Fat can be removed from hot broth by using a slice of bread to take up the grease.

Soups may be rendered more nutritious by adding sago or some cereal, as barley or rice. They should always be served hot and seasoned to suit the taste.

LIQUID DIET.

The liquid form of diet is generally used before and after operations and in the treatment of various diseases, as fevers and cases where the patient's digestion is poor. Milk is the ideal liquid food if it agrees with a patient. It can be served in many ways, but as it is a gas producer great caution should be used in prescribing it before or after operative cases or in any case where gas accumulates in the intestines. Milk may be taken hot or cold. It may be flavored with tea, coffee, vanilla, or diluted with lime-water or plain soda. It may also be added to soups or broths as desired. Milk goes to make up the essential part in the majority of liquid diets. The following are some of the common formulas for liquid milk diet:

Milk-shake.—Take six ounces of fresh milk and add two teaspoonfuls of sugar and flavor with a teaspoonful of vanilla. Place all in a wide-mouthed bottle with some cracked ice; cork securely and shake well for one or two minutes.

An entire egg, or the albuminous portion only, may be added previous to shaking. Wine may be substituted for the vanilla.

Peptonized Milk.—This is best prepared with Fairchild's peptonizing-tubes, each of which contains 5 grains (0.32) of extract of pancreatin and 15 grains (0.97) of bicarbonate of soda.

Sterilized Milk.—This process consists in raising the temperature of the milk to 210 degrees F. and keeping it at that point for thirty minutes. A simple method of sterilizing milk may be accomplished as follows: The sterile bottles are filled with milk and plugged with cotton, which has been baked brown in the oven. They are placed in a tin pail, which is then filled with water up to the necks of the bottles and placed on the range. The water is now boiled slowly for thirty minutes, when the bottles are removed and placed in a refrigerator until needed.

Pasteurized Milk.—This process consists in raising the temperature of the milk to 167 degrees F. and keeping it at that point for half an hour. Put the milk in sterile bottles and stopper with cotton batting which has been baked brown in the oven. Place the bottles in a covered pail and pour in water actually boiling at the time until they are immersed up to their necks. Allow the bottles to remain in the pail for thirty minutes and then place them in a refrigerator until needed. This raises the temperature of the milk to 167 degrees F. and maintains it at that point for half an hour while the water in the pail is cooling.

Albumenized Milk.—Add the white of an egg to half a tumblerful of milk and mix it by passing the blade of a knife gently to and fro in the tumbler. The mixture must not be beaten, as violent agitation coagulates the albumen and destroys its digestibility.

Milk Punch.—Take one cupful of milk, two tablespoonfuls of whisky or brandy, one teaspoonful of sugar, and a nutmeg. The milk is first sweetened with the sugar, the whisky or brandy

added, and the whole thoroughly mixed by pouring from one glass to another. Then grate a little nutmeg over the top. If the ingredients are shaken in two tin cups, one of which fits closely into the other, it makes a better and more attractive punch.

Milk Porridge.—Mix a tablespoonful of flour with one-fourth cupful of cold milk and stir into one-fourth cupful of hot milk; if desired, add two raisins cut into quarters. Cook over boiling water for one hour, and add one-quarter teaspoonful of salt just before serving.

Milk Lemonade.—Take two ounces of sugar, five ounces of boiled milk, one-half lemon, or two ounces of white wine, five ounces of boiling water, and the rind of half a lemon. Pour the boiling water over the peel and the sugar; allow it to cool, add the milk, and then the lemon juice or wine. Strain after ten minutes.

Milk-and-Cinnamon Drink.—Add a small amount of cinnamon to the desired quantity of milk and boil it. Sweeten with sugar and add brandy if desired.

Milk-and-Cereal Waters.—A most valuable method of preparing milk for invalids with whom it disagrees is to mix equal parts of milk and thoroughly cooked barley, rice, oatmeal or arrowroot water and boil them together for ten minutes. This may be served plain, or flavored by cooking with it a cut-up raisin, a sprig of mace, or a piece of stick cinnamon, which should be strained out before serving.

The various forms of liquid diet, such as gruel combinations of egg and milk and different broths, follows:

Albumen Water No. 1.—Add the white of an egg to a tumblerful of ordinary lemonade and mix it by passing the blade

of a knife gently to and fro in the tumbler; the albumen coagulates if the mixture is beaten.

Albumen Water No. 2.—Add the white of an egg to half a tumbler of ice-water, mix as in No. 1 and season with a little salt.

Egg-Nog.—Put the yolk of an egg in a tumbler and mix it well with a teaspoonful of sugar. Then add a tablespoonful of brandy, whisky, or sherry wine and fill the tumbler about two-thirds full with ice-cold milk. Then mix thoroughly by pouring from one glass to another or shaking in two tin cups, and strain into a tall, thin glass. Beat the white of the egg to a stiff froth, add a little sugar, and place it on the egg-nog. Then grate some nutmeg over the top.

Egg Lemonade.—Thoroughly beat one egg with a tablespoonful of sugar and then mix with a wineglassful of water and the juice of a small lemon. Pour the whole into a tumbler containing pounded ice and stir with a spoon.

Clam Broth.—Wash three large clams very thoroughly, using a brush for the purpose. Place in a kettle with half a cupful of cold water. Heat over the fire; as soon as the shells open the broth is done. Strain through muslin, season, and serve.

Oyster Broth.—Select eight fresh oysters, chop them fine in a chopping-tray, and turn them into a saucepan with a cup of cold water; set the saucepan on the fire and let the water come slowly to the boiling point, then simmer for five minutes; strain the liquid into a bowl, flavor with half a saltspoonful of salt, and serve hot.

Chicken Broth.—An old fowl will make a more nutritious and tasty broth than a young chicken. After cleaning and removing all that is not clear flesh, the fowl is cut into small pieces and placed in a saucepan. It is then covered with cold water, al-

lowed to simmer for two hours, and finally to boil slowly for two hours more. It is then strained and placed aside to cool, when the fat is carefully skimmed off. It is served hot and seasoned with pepper and salt.

Mutton Broth.—Take two pounds of mutton from the loin or the lean part of the neck, remove skin and the fat, and cut it into small pieces about two inches square. Put the meat and the bones in a saucepan or a kettle, cover with a quart of cold water, and add a tablespoonful of rice or pearl barley; then let simmer gently for two hours, strain, and place aside to cool. Skim the fat off carefully. It is served hot and seasoned with pepper and salt.

Beef Broth.—Allow one pound of meat, or meat and bone, to every quart of water. Wash the meat with a cloth in cold water and cut it into small pieces. Put the meat and the bone into a saucepan or a kettle with cold water and cook it at a low temperature for two hours. Then boil for two hours and strain through a coarse strainer. Skim as much fat as possible from the surface with a spoon and then remove the remaining small particles with a sheet of clean unsized paper drawn over the surface. Season the broth with salt and pepper and serve hot.

Beef-tea.—Take a pound of lean beef, free from fat and fibrous tissue, cut it into small pieces and place them in a fruit jar with a good cover. Add to it a pint of cold water and stand in a moderately warm place for one hour; then let it simmer gently for two hours more, then strain and season with salt and pepper.

Oatmeal Water.—Put a cupful of oatmeal into two quarts of boiled water and place it aside in a warm place (80 degrees F.) for an hour and a half. Then strain it and put in a refrigerator.

Barley Water.—Put three tablespoonfuls of barley (the grain) into four cupfuls of cold water and place it aside for twelve hours. Then boil it gently for an hour and a half and strain. Season it with salt, sugar and lemon juice and serve hot.

Toast Water.—Toast three slices of bread until they are very brown and then break them into small pieces. Put them into a bowl with a pint of cold water and set aside to soak for an hour. Strain through a napkin and squeeze out the liquid, to which is added a little cream and sugar. It is served cold.

SOFT DIET.

When it is advisable, in any case of sickness, to substitute a more substantial diet depends entirely on the individual case and the instructions of the physician, but when such a change is ordered it is well to make it gradual and continue part of the liquid diet, occasionally substituting what is known as a soft diet. The patient's appetite can be consulted and a selection made from the following, which are the chief forms of soft diet:

Eggs: Poached (plain or on toast); scrambled; omelet; soft-boiled.

Oysters: Raw; stewed; panned; roasted.

Bread: Stale bread; Graham bread toasted; croutons; sippets; milk-toast; buttered water toast; cream toast; buttered dry toast; plain crackers.

Soups: Chicken; cream-of-celery; cream-of-rice; chicken panada.

Potatoes: Baked; creamed.

Sweetbreads: Creamed.

Mush: Oatmeal; farina; wheat germ; cracked wheat; hominy; cornmeal.

Fruit: Oranges; grapes; baked apples; stewed prunes; stewed apples.

Desserts: Wine jelly; soft or baked custard; junket or slip; cream-of-rice pudding; peach foam; cornstarch pudding; boiled rice with cream and sugar; vanilla ice-cream; rice cream; orange jelly; chicken jelly; sponge cake and cream; barley pudding.

Recipes for most of the above forms of soft diet can be found in a good cook-book. Following are a few formulas for some of those articles of diet which may be found of value:

Cream Toast.—Take one pint of milk, one tablespoonful of flour, one tablespoonful of butter, one saltspoonful of salt, and several slices of bread. Make a white sauce with the milk, flour, and butter, according to the following directions: Pour the milk into a saucepan and set it on the fire to heat. Put the butter and the flour together in another saucepan; place it on the fire and stir gently until the butter melts; let them bubble together for two or three minutes. Then pour in a little milk and stir until the two are mixed; add a little more milk and stir again until it bubbles, and so continue until all the milk is in. Now add the salt and let it simmer slowly until the toast is prepared. Soak the slices of toast thoroughly in salted boiling milk, arrange them in a covered dish and pour the cream over them.

Soft Custard.—Take one pint of milk, the yolks of two eggs, two tablespoonfuls of sugar, and one saltspoonful of salt. Put

the milk into a saucepan and place it on the stove to boil. Beat together the yolks of the eggs, the salt, and the sugar, and when the milk just reaches the boiling point pour it in slowly, stirring until all is well mixed. Then pour the mixture into the saucepan at once and cook for three minutes, meanwhile stirring it slowly. Then strain it into a cool dish and flavor it with a teaspoonful of vanilla or sherry wine.

Baked Cup Custard.—Beat one egg thoroughly; add a flat teaspoonful of sugar, beat again and pour the mixture into a breakfast coffee-cup. Then stir in sufficient milk to fill the cup three-fourths full, place a teaspoonful of butter on the top, and grate some nutmeg over the surface. Bake in a fairly hot oven for thirty minutes and then put the cup in a refrigerator to cool.

Cream of Rice Pudding.—Take one quart of milk, one-half a cupful of rice, two tablespoonfuls of sugar, and one saltspoonful of salt. Put the milk, rice, sugar, and salt together in a pudding dish, stir until the sugar is dissolved, then place the dish in a pan of water and bake in a slow oven for three hours, cutting into the crust which forms on the top once during this time.

Barley Pudding.—Take two tablespoonfuls of barley flour, one tablespoonful of sugar, one saltspoonful of salt, one cupful of boiling water, one-half of a cupful of rich milk, and the whites of three eggs. Mix the flour, sugar, and salt in a saucepan with a little cold water. When smooth and free from lumps, pour in the boiling water, slowly stirring to keep it smooth, and then set it on the fire to simmer for ten minutes, continuing the stirring until it is thick. At the end of ten minutes put in the milk and strain all into a clean saucepan through a coarse strainer, to make the consistency even. Beat the whites of the eggs until light but not stiff, and gently stir them into the pudding, mak-

ing it thoroughly smooth before returning it to the fire. Cook for five minutes, stirring and folding the pudding lightly until the egg is coagulated. Then put into a china pudding dish and serve cold with cream.

REGULAR DIET.

If the patient continues to improve, the regular diet is substituted for the soft diet, just as the soft diet was substituted for the liquid. The change should be gradual at first. The patient must not be allowed to eat pastry, heavy puddings, hot bread or any kind of hot cakes, highly seasoned or fried foods, crabs, lobsters, or overcooked meats like pork or sausages. All of these are to be added gradually. Patient may be allowed meats in small quantities, such as a small amount of rare roast beef or a small tenderloin steak cooked as above mentioned; various kinds of game, fish, vegetables and fruits, and teas and coffees as desired. This constitutes what is known as regular diet.

CHAPTER XXI.

INDOOR EXERCISE.

That the average American girl is handicapped by low vitality of the nervous system and a lack of muscular development is generally conceded. The consequent pelvic troubles and complicated labors after marriage bring us to realize the necessity of building up women physically as well as mentally. Too much schooling, music, and indoor life, combined with a lack of proper physical exercise, lay the foundation for many kinds of female trouble. That this truth is realized by the laity as well as by the medical profession is proven by the fact that in our present-day schools and colleges, and in many homes as well, young girls are required to take up gymnasium work or out-of-door sports. Tennis, golf, basketball, baseball, and horseback riding all help to develop a perfect physique. We take it for granted that a great many women are so situated that they cannot indulge in such outdoor exercises; therefore, we will endeavor to outline a series of indoor exercises as a substitute. A normal condition of the pelvic organs depends largely upon the circulation of those organs, the strength of the abdominal muscles and the capacity of the lungs. If we can keep the supporting power of the abdomen in a

normal condition and the uterus and ovaries and tubes maintain their normal position, there is no tendency to pelvic congestion. Upon the other hand, if the abdominal wall is relaxed as shown in Fig. 91, the diaphragm is restricted by improper breathing, the pelvic organs become displaced, and congestion results. Indoor exercises, as they will be outlined, will have a tendency to strengthen the abdominal and chest muscles, increase the breathing capacity of the lungs, and develop a form nearer to perfection, as illustrated in Fig. 92.

It is true that in early womanhood the muscles are stronger and the abdomen does not protrude as it does later in life, but perfect development of the abdominal muscles in youth will prevent the abdomen from protruding in later years.

Indoor exercises are most beneficial in the morning, as at this time the circulation is sluggish. If a few minutes are devoted to active movements of the body, the action of the heart and lungs is accelerated, the surface of the skin soon becomes covered with a slight perspiration and the regular routine of a cold sponge is followed by rapid and healthy reaction. Certain rules must be adhered to in taking indoor exercises and they must be followed to a letter.

Rule 1. Have plenty of fresh air in the room, but

there should be no draft. Open the windows from the top.

Rule 2. A woman should be so dressed that the

Fig. 91.—Showing the incorrect position and a relaxed abdominal wall. (Ashton's Practice of Gynecology.)
Fig. 92—Showing the correct position, with the abdominal wall contracted. (Ashton's Practice of Gynecology.)

waist, hips, chest and neck are perfectly free. Pajamas

and stockings are all that are required, as shown in Fig. 93.

Rule 3. These exercises should be taken when the

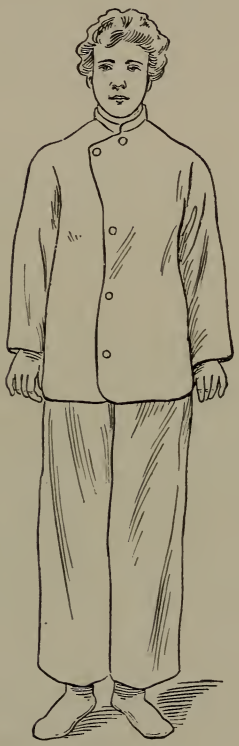


Fig. 93—Proper costume for indoor exercises. Pajamas and stockings. (Ashton's Practice of Gynecology.)

stomach and bladder are perfectly empty,—before breakfast in the morning or just before retiring in the evening.

Rule 4. The time devoted to physical culture depends upon the condition of the patient. From ten to twenty minutes and longer if indicated.

Rule 5. A woman should not omit these exercises because she feels tired or lazy. She should continue them faithfully, as many cases require some time to obtain the desired results.

Rule 6. A woman should concentrate her attention upon the exercises and the action of the muscles involved. If she does not do this she cannot expect to get the best results.

Rule 7. Never exercise too rapidly; take plenty of time and after each course of exercise take a brief period of absolute muscular rest. If the breathing or heart's action is hurried, the patient should lie down and rest until they are normal. After each single exercise she should rest for a moment in order that she does not over-tire the muscles and thereby destroy their proper action.

Rule 8. If the exercises are taken in the morning, take a cold sponge or spray bath and dry the skin vigorously with a coarse towel. If they are taken in the evening, take a warm bath and get into bed at once. The number and character of the movements should be regulated according to the strength of the patient. The

woman that is in normal health should go through with the twelve different exercises every morning.

SPECIAL DIRECTIONS.

The best results cannot be attained unless the instructions given above are carried out and the rules strictly adhered to. In all the exercises except No. 2 the abdominal muscles should be firmly contracted and the lungs filled with air while the various movements are being made. If this is not done the muscular strength of the abdomen will not be restored and the breathing capacity will not be increased. Remember that the good effects produced by the exercises will be greatly increased if the patient breathes deeply and keeps the abdominal muscles contracted when walking. At first she may find this rather difficult, but gradually as she continues the exercises and the muscles regain their tone, the effect becomes less marked and in time the abdominal walls contract naturally.

Between each movement the patient should rest ten seconds, and during each exercise every movement should be repeated from three to five times.

EXERCISE I.

Deep Breathing.—Place the hands on the sides of the body, resting on the hips as illustrated in Fig. 94,

and draw in the breath slowly until the lungs and chest are fully expanded, the shoulders elevated, as seen in

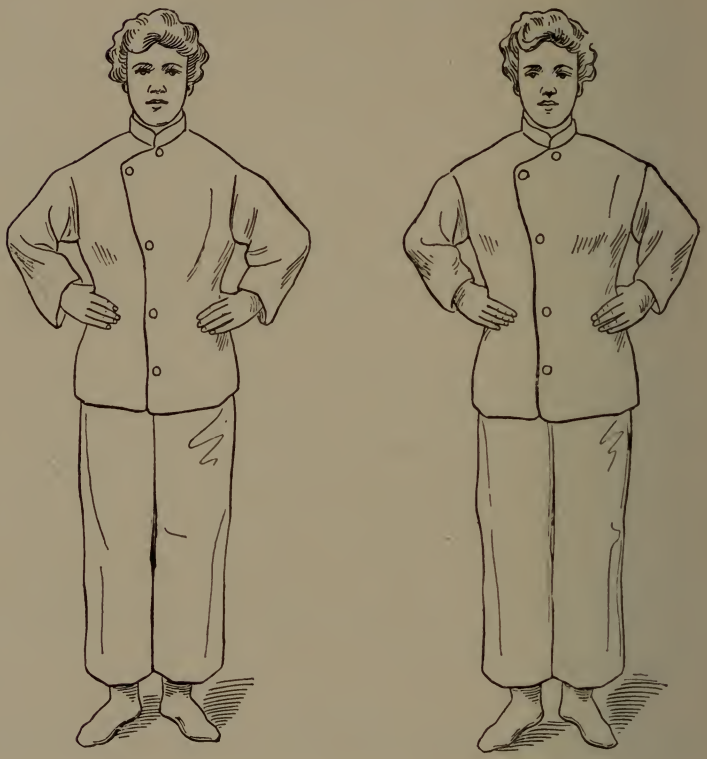


Fig. 94—Exercise No. 1, deep breathing. Before the exercise. (Ashton's Practice of Gynecology.)

Fig. 95—Exercise No. 1, deep breathing. The lungs filled with air. (Ashton's Practice of Gynecology.)

Fig. 95. Hold the breath and contract the abdominal muscles for a few seconds, then let the breath go out

gradually until the air from the lungs is completely expelled. Keep the mouth closed and breathe through the nose during the exercises.

EXERCISE 2.

Contracting the Abdominal Muscles.—Stand erect, as in exercise 1, with the hands resting on the hips and contract and relax the abdominal muscles. The dotted line in Fig. 96 shows the movement of the abdominal walls.

EXERCISE 3.

Bending the Body Backward.—Stand erect with hands on the hips as in Fig. 94; take a full breath, contract the abdominal muscles and bend the body slowly backward, Fig. 97; then gradually straighten up again and expel the air from the lungs.

EXERCISE 4.

Bending the Body Forward.—Stand erect with arms raised as high as possible above the head, as illustrated in Fig. 98, the hands turned forward and the thumbs loosely interlocked. Take a full breath, contract the abdominal muscles and bend the body forward without bending the knees until the tips of the fingers touch the floor. Return to the erect position, raise the heels from the floor and

expel the air from the lungs as the arms are slowly lowered to the sides of the body. During this exercise the

Fig. 96—Exercise No. 2, contracting the abdominal muscles. The dotted line shows the movements of the abdominal wall. (Ashton's Practice of Gynecology.)
Fig. 97—Exercise No. 3, bending the body backward. (Ashton's Practice of Gynecology.)

arms and hands must be kept extended. The patient may be unable to touch the floor with the tips of the

fingers at first, but after practicing the exercises from

Fig. 98—Exercise No. 4, bending the body forward. First position. (Ashton's Practice of Gynecology.)
Fig. 99—Exercise No. 4, bending the body forward. Second position. (Ashton's Practice of Gynecology.)

time to time the spinal column becomes flexible and it can be accomplished without difficulty, as shown in Fig. 99.

Fig. 100—Exercise No. 5, bending the body sideways and forward. (Ashton's Practice of Gynecology.)

EXERCISE 5.

Bending the Body Sideways and Forward.—These movements are similar to those of exercise 4, except that the body is bent sideways in place of directly in front, the tips of the fingers touching the floor first on one side and then on the other as illustrated in Fig. 100.

EXERCISE 6.

Bending the Body Sideways.—Stand erect with the hands on the hips as shown in Fig. 94; take a full breath, contract the abdominal muscles and bend the body first to

one side and then to the other as illustrated in Fig. 101. Allow the head to follow the movements of the body.

Fig. 101—Exercise No. 6, bending the body sideways. (Ashton's Practice of Gynecology.)
Fig. 102—Exercise No. 7, twisting the body. (Ashton's Practice of Gynecology.)

EXERCISE 7.

Twisting the Body.—Stand erect with the hands resting on the hips, Fig. 94, heels close together, thighs rigid;

take a full breath, contract the abdominal muscles and twist the body several times from one side to the other

Fig. 103—Exercise No. 8, squatting. First position. (Ashton's Practice of Gynecology.)

Fig. 104—Exercise No. 8, squatting. Second position. (Ashton's Practice of Gynecology.)

as far as possible, Fig. 102. Allow the head to follow the movements of the body as in Exercise 6.

EXERCISE 8.

Squatting.—Stand erect with hands on the hips, heels separated about four inches as illustrated in Fig.

Fig. 105—Exercise No. 9, raising the body. First position. (Ashton's Practice of Gynecology.)

Fig. 106—Exercise No. 9, raising the body. Second position. (Ashton's Practice of Gynecology.)

103; take a full breath, contract the abdominal muscles and slowly assume a sitting or crouching position with the buttocks close to the heels, Fig. 104; then straighten up again and expel the air from the lungs.

EXERCISE 9.

Raising the Body.—Lie flat on the floor with the legs extended, feet close together, hands resting on the hips as illustrated in Feg. 105. Take a full breath, contract the

Fig. 107—Exercise No. 10, raising both legs at the same time. (Ashton's Practice of Gynecology.)

abdominal muscles and raise the trunk slowly until a sitting position is attained as shown in Fig. 106. Then gradually let the body return to the floor and expel the air from the lungs. During this exercise keep the spine straight, the shoulders well back and the chest expanded.

At first in order to assist the abdominal muscles and steady the legs it would be a good idea to place the feet under a bureau or couch.

Fig. 108—Exercise No. 10, raising the legs alternately. (Ashton's Practice of Gynecology.)

EXERCISE 10.

Raising the Legs.—Lie flat on the floor with the feet close together, hands on the hips; take a full breath, contract the abdominal muscles and slowly raise the legs straight up to a right angle with the body, Fig. 107; then return to the original position and expel the air from the

lungs. At first the patient may not be able to raise both legs at the same time. If not, she should elevate first one and then the other, Fig. 108, until the muscles become strong enough to accomplish the regular movement.

EXERCISE 11.

The Dip Movement.—The patient should lie on the stomach and chest with the palms of the hands flat on the floor close to the sides of the body, toes somewhat bent and the feet close together, Fig. 109. Take a full breath, contract the abdominal muscles and raise the body on the hands and toes by slowly extending the arms, Fig. 110; lower the body to the original position, Fig. 109, and expel the air from the lungs.

Fig. 109—Exercise No. 11, the dip movement. First position. (Ashton's Practice of Gynecology.)

EXERCISE 12.

Raising the Body Backwards.—Lie on the stomach and chest, hands placed on the hips, legs extended, toes out straight, and chest resting on the floor, Fig. 111.

Take a full breath, contract the abdominal muscles and slowly raise the body and head as far as possible, Fig. 112. Lower the body to the original position, Fig. 111, and expel the air from the lungs. Rest as directed in special instructions and repeat.

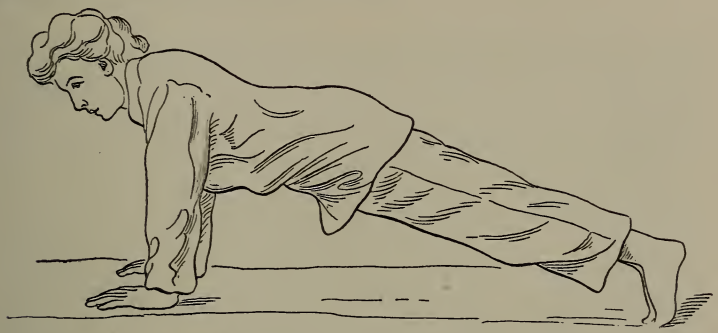


Fig. 110—Exercise No. 11, the dip movement. Second position. (Ashton's Practice of Gynecology.)

Fig. 111—Exercise No. 12, raising the body backward. First position. (Ashton's Practice of Gynecology.)

Fig. 112—Exercise No. 12, raising the body backward. Second position. (Ashton's Practice of Gynecology.)

CHAPTER XXII.

HOT APPLICATIONS.

The methods in which water may be applied to the human body for the relief of various diseased conditions are many. We will endeavor to give the technique of applications in general with special attention to the dis-

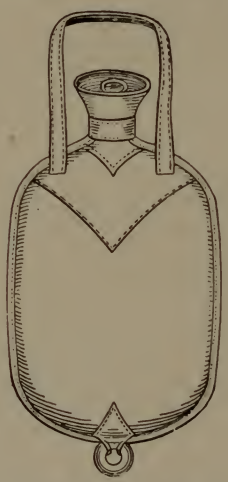


Fig. 113—A hot water bottle. It should be only partly filled with hot water. The air should be expelled before screwing in the stopper.

eases of women. Hot applications applied in an exact and scientific manner as tested by practical experience are reliable and essential in assisting the physician to relieve a great deal of the inflammation and suffering that is peculiar to women. This fact is often lost sight

of or neglected altogether. As a rule when hot applications are ordered by the physician, and such methods are employed, little or no benefit is obtained. This is ofttimes due to the fact that the physician is not familiar with the subject of hydrotherapy and does not give the proper

Fig. 114—Showing the electrotherm as used in place of the hot water bottle. (This outfit can be purchased from H. W. Johns-Manville Co., Seattle, Wash.

instructions to the patient or attendant, who applies the heat in a crude way and gains no results. If we wish to give medicine for a certain condition we must have a knowledge of its action and know the results we expect to get from its use. Therefore, it is essential for the

physician to thoroughly understand the action of heat and carefully instruct his patients in the technique of its application.

Effects of Heat.—We make use of hot applications chiefly to relieve pain in chronic and acute conditions. The effect will depend upon the degree of heat and the duration of the application. Excessive heat causes the blood vessels to contract and prevents the spreading of the inflammation. A more moderate heat will cause the small blood vessels to dilate and increase the blood supply to the parts. In that way it controls the inflammation by absorbing the poison or fluid which may be in the tissues and causing the disease, and carries it to other parts of the body to be eliminated by the bowels and kidneys. But no beneficial results can be expected if the applications are applied in a haphazard or careless manner. All details must be thoroughly carried out.

The Technique of Hot Applications.—In using hot applications on the abdomen for various pelvic troubles the heat must be applied continuously and kept at an even temperature. This is best accomplished by the use of the hot water bottle, Fig. 113, or the electrotherm, Fig. 114. The electrotherm is composed of wires protected by asbestos. It is light and can be connected with an ordinary electric light socket and is provided with a regulating switch so the heat can be increased or lessened as desired. This method of applying heat has many advan-

Fig. 115—Showing the manner in which hot applications are used for local pelvic trouble. The moist, hot flannel is next to the skin; the oiled silk and Turkish towel are turned back.

tages over the use of the hot water bottle and when dry heat is ordered it has no equal.

When moist heat is applied locally as illustrated in Fig. 115, the hot water bottle or electrotherm is placed upon the moist dressing to keep it at an even temperature. This is the only way to secure the best results.

The articles required for turpentine stoops or moist applications are illustrated in Fig. 116. A piece of flannel should be folded two or three thicknesses so as to cover the parts to which the heat is to be applied. It should be wrung out of hot water by using the apparatus illustrated in Fig. 116 and when quite dry should be placed directly upon the skin and covered with a piece of oiled silk. Over this is placed a piece of woolen blanket or a Turkish towel and over all the hot water bottle or electrotherm. The moist dressings should be changed often enough to keep them both moist and hot. Sometimes the turpentine is placed in the water, using a teaspoonful to a quart of water, but a better plan is to mix the turpentine with an equal amount of hot lard and after heating the abdomen with the moist applications the hot turpentine and lard is rubbed in thoroughly. Then the moist applications are applied as directed above. The temperature of the water should be as hot as can be borne by the patient. Some can bear much more heat than others, so there is no fixed temperature by which one may be guided.

THE HOT BLANKET PACK.

When the hot blanket pack is used the entire body is enveloped in a woolen blanket wrung out of water as hot as can be endured by the patient. In employing a hot pack of this sort the technique is of value and must be carefully followed if one wishes to obtain the best results. It is necessary to have a bed with a good mattress, a small pillow, four or five woolen blankets, a rubber blanket, three or four common glass bottles or the ordinary hot water bottles filled with hot water, and a vessel similar to the ordinary washtub filled with water at a temperature of one hundred and sixty degrees.

Method of Application.—The pillow is placed upon the bed and the rubber sheet is spread out, the upper edge just covering the pillow. All but one of the woolen blankets are spread out smoothly one after another, the upper part being even with the rubber sheet. Now one woolen blanket is placed in the water and wrung out as quickly as possible. This is best accomplished by two persons taking hold of the ends of the blanket and twisting it in opposite directions until it is as dry as it is possible to make it. It is then spread out upon the dry blanket, and the patient, having been previously disrobed, lies down in the center of the blanket and is quickly enveloped in the following manner:

The arms are extended above the head and one side of the blanket is drawn across the body and brought well

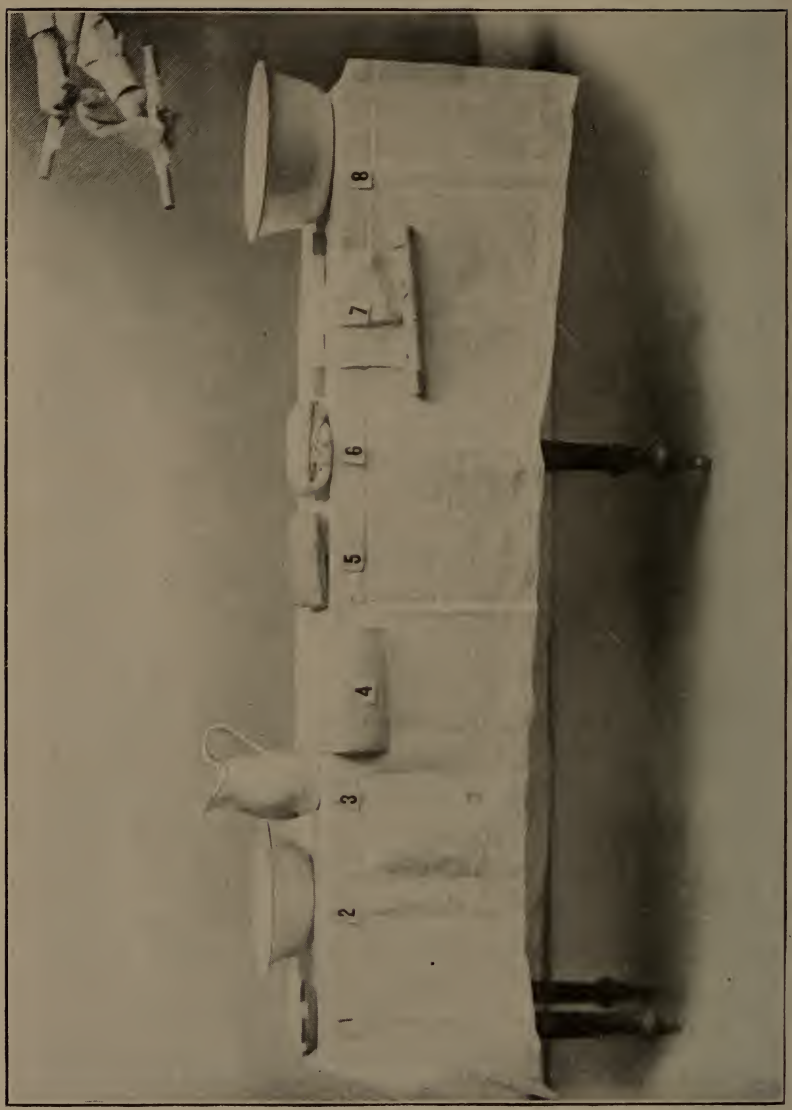


Fig. 116—Showing the articles required for turpentine stoops or hot applications, and also the best method for wringing the hot cloths.

1—A small pan containing hot lard and turpentine, equal parts.

2—Ordinary wash bowl.

3—Pitcher filled with boiling hot water.

4—Oiled silk.

5—Flannel cloth three or four layers thick.

6—Turkish towel.

7—A wringer made by taking a small towel and turning the ends over, thereby making loops through which are thrust two small sticks. (An old broom handle sawed the right length answers the purpose very well.) The loops can be sewed fast or pinned with safety pins.

8—Showing how the flannel cloth is wrung by twisting the sticks in opposite directions. When this method is employed the hands do not need to come in contact with the hot water. The wringer is placed in the basin, the cloth is laid upon it, and enough hot water is poured over it to completely saturate the flannel. It is now raised out of the water by the use of the sticks, wroung and applied as directed.

up under the arms and tucked closely along the side of the body. From the hips down the blanket is tucked around the leg of the corresponding side, leaving the other leg uncovered. Now the patient lowers the arms and holds them close to the sides, and the other side of the blanket is passed over and tucked in. A fold of the blanket is made to fit closely around the neck, but should not be tight enough to interfere with the breathing or circulation of the blood. The farther edge of the blanket is drawn across the patient and tucked under the shoulder, side and legs with great care. A fold is made over the farther shoulder in like manner. The blanket is stretched out by pulling each end and is doubled under at the foot. The dry sheet is now brought over each side around the shoulders and protects the face and neck from contact with the hot blanket and at the same time keeps out the air. Two or more of the dry blankets which were first placed on the couch are folded over, and hot water bottles are placed at the feet and along the sides of the body to increase the heat.

Great care must be taken not to burn the patient, as this accident often occurs. There are many conditions in which this hot blanket pack is very useful and will give good results, but it should be employed only when ordered by the attending physician. After the desired effect is obtained the wet blankets are quickly removed and the patient dried and given an alcoholic rub.

We have not mentioned any special disease or conditions in which hot applications are employed, as this book is not written with the intention of teaching how to diagnose and treat disease. Our desire has been to instruct you in the manner of applying and reasons for hot applications. Your physician will prescribe them if they are necessary.

CHAPTER XXIII.

COLD APPLICATIONS.

Cold applications applied locally produce various effects. If an ice-bag is placed over a large artery it lessens the circulation; that is, an ice-bag applied to the elbow would lessen the circulation in the hand. An ice-bag placed over the heart will lessen the rate of blood movement through the body if it is applied continuously for several hours, but when only for a short time it increases the heart's action. Therefore, a general cold application is a powerful heart tonic. The effect of cold upon the mucous membranes is about the same as when applied to the skin. A quantity of cold water taken into the stomach produces a greater effect than if applied to an equal area of skin.

Local ice-bags applied to the head or abdomen are generally used to relieve acute troubles like the beginning of appendicitis or pelvic inflammation. Or, they may be used to relieve headaches and congestions due to high fevers like typhoid. They are, however, rarely used in chronic cases.

The most convenient way of applying ice is illustrated in Fig. 117, the ice-bag. The ice is broken up in fine pieces and placed in the ice-bag, which should not

be filled too full. The air should be expelled before the cap is screwed on, so that it will fit closely to the body, as in Fig. 118, which illustrates the correct and incorrect method of application. The ice-bag is placed directly on the skin and allowed to remain there an hour or more. The head caps are so made that they fit the head closely. Ice-bags are also used on the spine. They may be applied several times daily, sometimes continuously for several hours, but if the continuous method of application is employed, several layers of sheeting, towels or muslin should

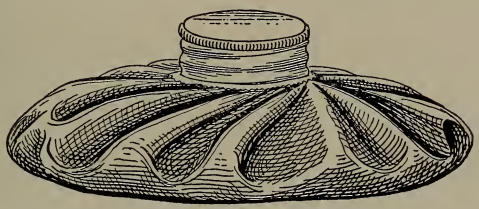


Fig. 117—Showing the ice-bag.

be placed between the skin and the ice-bag. When none of the above appliances are at hand a convenient way is to wrap the broken ice in a Turkish towel, which should be pinned closely over it. If flattened out in the form of a pad, it will conform itself to the part to which it is applied.

Cold applications in the way of baths and cold packs are used to reduce temperature. These are applied by laying towels on or wrapping the patient in a sheet wrung

out of cold water. The sheet is applied in the same way as the hot blanket pack.

When administered in the form of a sponge bath or shower these applications are very stimulating and bring about a reaction. They have a tendency to increase deep breathing, stimulate the heart, increase the amount of urine, harden the skin, and strengthen the system. The duration should be very brief and immediately followed by friction and exercise. Some women cannot respond

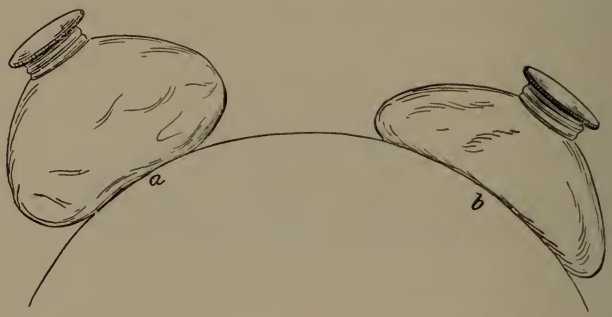


Fig. 118—Showing the correct and incorrect method of applying the ice-bag. (Ashton's Practice of Gynecology.) (a) Incorrect. (b) Correct. It should lay flat on the surface of the body.

to the reaction quickly enough to obtain the desired results, so care must be taken at the beginning of such a treatment.

The cold foot bath, with the water at a temperature of forty to fifty degrees, is employed for a few minutes, sometimes with beneficial results. It seems to have a tendency to stimulate the circulation of the brain. It

also has a decided influence in causing the contraction of the blood vessels and muscles of the uterus and the organs connected with it. Some authorities claim that the blood vessels of the liver, bladder, intestines and stomach are made to contract at the same time. While taking the bath the feet should be continually rubbed by an attendant or the patient may rub one foot against the other in order to keep up a continual friction. The foot bath must not be used when there is chronic inflammation of the pelvic organs, liver, kidneys or stomach. In these cases the applications should be hot.

Cold compresses are applied in the same manner as hot; that is, the piece of flannel, similar to that used for hot compresses, is soaked in ice water one or two minutes and then wrung as dry as possible with the hands. They should be changed every three or four minutes. These cold compresses may be applied to any part of the body for various acute conditions. When applied to extensive parts, as the spine, the treatment should not be continued until the skin becomes blue or numb. In this case the compress should be removed for a few minutes and the surface rubbed with a piece of warm, dry flannel until the skin becomes quite red.

When using the ice-bag or cold compress, it is well to place a rather thick woolen cloth next to the body to avoid excessive chilling of the skin. If the ice-bag is

applied directly to the skin great care must be exercised to prevent the tissue from becoming injured, and the application must be removed for a few minutes every half hour and the parts rubbed so that reaction may occur. The effect is better if the cloth laid upon the skin is saturated with cold water and wrung as dry as possible with the hands.

The ice-bag or compress may be used for all acute inflammations of the uterus, tubes, ovaries, bladder, or for appendicitis. Compresses are applied immediately to burns, especially scalds, as a means of giving great relief. In fact, ice may be applied to any part of the body where a diseased or inflamed condition is just beginning to develop. It is also employed in cases of hemorrhage, as bleeding from the lungs. Placed over the stomach, the ice-bag will often check vomiting. Bleeding from the nose may be checked by cold compresses placed on the face or on the upper part of the spine. Ice is also used for throat trouble.

The action of ice or cold compresses depends upon the place of application and the length of time that it is kept on. They should be used only when ordered by a physician, as prolonged applications will do serious injury and lower the vitality of the tissue quite rapidly. Ice water compresses will produce a more cooling effect than the ice-bag. The very cold compress is valuable in many

cases, but must be used with great discretion. Heat may be used in almost any instance, while, on the other hand, the application of the ice-bag and ice compress will do serious injury if not properly watched and attended to.

CHAPTER XXIV.

BATHS.

Frequent bathing is necessary to keep the skin in a normal and healthy condition. If women were thoughtful about keeping the stomach and bowels in good condition and the surface of the body clean there would be much less sickness and ill health. To fully realize the beneficial effects of proper bathing, however, the time of day, the method employed, the position of the patient, the duration, the temperature and quantity of the water, the proper exercise to bring on a reaction, the time devoted to rest, and the temperature of the bathroom should be considered and the following instructions properly carried out. Baths should not be given in a haphazard or careless manner, as this many times does more harm than good.

Time.—Warm or hot baths should be taken at night just before retiring or in the afternoon, if the patient can lie down afterwards. Stimulating baths like the cold spray, shower, or sponge should be taken in the morning immediately after rising. It is impossible to give a fixed rule for every case, as conditions vary, so the patient must select the best and most convenient time for treatment.

Method Employed.—Owing to the cost of the modern bathroom fixtures many are debarred from possessing them and must therefore substitute such appliances as they can afford. Often a home apparatus which will give the desired results can be fixed up at a very nominal cost. The elaborate needle and shower baths are an expensive luxury. The Home Needle Spray, which is manufactured by the Holmes Manufacturing Company of this city, is the cheapest and best apparatus of its kind on the market. In giving the technique of the different baths we will endeavor to make it plain and practical, so that no woman need be deprived of the benefits of proper bathing.

The Position of the Patient depends upon the kind of bath, the method employed, and the results desired. There are three positions, standing, lying and sitting, each of which will be duly considered.

The Temperature of the Water is one of the most important factors, and too much attention cannot be given it. As previously mentioned, heat or cold may do great harm if applied in a haphazard way. In every case it should be decided whether a quick or slow stimulation is required, whether one wishes to relax the tissue or relieve pain, and the temperature of the water should be regulated accordingly. A thermometer should always be used to take the temperature. Otherwise the action

of the heat or cold cannot be regulated, and consequently no beneficial results will follow. The ordinary bath thermometer should be employed and the patient should know how to use it. The temperature of the cold bath should be from fifty to seventy-five degrees; the tepid bath, seventy-five to ninety-five; the warm bath, ninety-five to one hundred and four; the hot bath, one hundred and four to one hundred and twenty.

The Duration of the Bath depends upon the desired results. The cold bath, in the form of a shower, plunge, or sponge of brief duration, is stimulating in its action upon the general system because the reaction is rapid and there is no shock. If it were prolonged the patient would be chilled and serious results would follow. The hot bath is prolonged for some time in order to cause permanent contractions of the blood vessels and the necessary relaxation of the tissue.

Exercise.—After a cold bath in any form there should be quick, vigorous rubbing of the skin with a Turkish towel to bring the blood to the surface. This should not be neglected, because if there is no reaction the brief cold application will be very depressing and lower the vitality. When hot baths or local hot applications are employed this friction is not necessary.

Rest.—The patient should rest after taking a warm

bath. Consequently it should be taken just before retiring. However, the condition of the patient has much to do with the amount of rest required. Some patients require more rest than others, and some do not care to lie down at all after taking a bath in the afternoon. Each patient must be a law unto herself in regard to this, but it is best that a warm or hot bath be followed by a period of rest. This is not so important after a cold bath.

Temperature of the Room.—The bath should be taken in a room that is quite warm. The temperature should be ascertained by a thermometer and should be from seventy-five to eighty degrees.

The Kinds of Baths.—It is very difficult to go into sufficient detail in this small volume to give a clear conception of so large a subject and the good results that can be obtained by the proper baths. The attending physician will suggest the kind of bath best suited to the patient. We will discuss the technique of the different methods under separate headings.

The Full Bath is one in which the entire body is covered with water. It may be any temperature, but the hot bath at one hundred and four degrees is generally used. The patient should remain in the water from ten to twenty minutes. It should be taken in the evening, as it has a very sedative effect, causes a general relaxation

and produces sleep and rest. After the skin has been thoroughly dried with a soft towel which will not cause much friction, the patient should go to bed immediately, no exercise being necessary. Special conditions might exist in which it would be necessary to prolong the bath, but this should be done only under the directions of the attending physician.

Fig. 119—Showing the half bath. The tub is partly filled with water so that when the patient lies down in it only half of the body is covered. (Ashton's Practice of Gynecology.)

A full cold bath is employed in some cases, but as a general rule we do not recommend it. The cold spray which is illustrated in Fig. 122 is more beneficial.

A full tepid bath at seventy-five to ninety-five degrees may be taken in the afternoon, the duration being but a few minutes. The skin should be dried by friction with a coarse towel, and as a certain amount of exercise is necessary to bring about a reaction, we would advise following out the instructions given in Chapter XXI, INDOOR EXERCISE.

The Half Bath may also be taken in the afternoon, so that the patient may have an opportunity to rest before dinner, exercise being unnecessary. The tub is partly filled with water so that when the patient lies down the body is only about half covered, Fig. 119.

It is well to have an attendant when taking this bath, so that the part of the body that is not covered may be

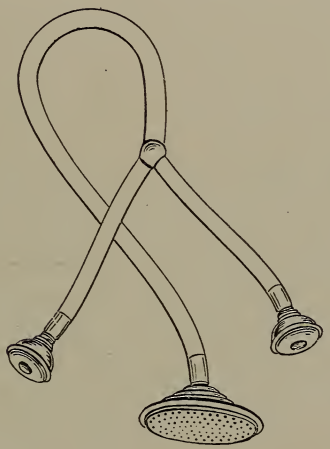


Fig. 120—Showing the adjustable spray which may be attached to any bathtub. (Ashton's Practice of Gynecology.)

vigorously rubbed, especially over the chest and abdomen. A patient can do this herself, but when it is possible to afford a nurse it is much better to have one. The temperature of this bath should be from seventy to eighty degrees. The duration should be from ten to fifteen minutes. The patient then sits up in the tub and the

spine and shoulders should be sponged with water a little bit colder than the bath water. A sponge should be used. The sponge should last only a few seconds and be followed by vigorous friction with a coarse towel, after which the patient should be wrapped warmly and lie down half an hour before dressing. A woman who is in perfect health and of the average physique can take this bath without an attendant and obtain very good results. Every part of the body can be rubbed by grasping an end of the towel in each hand and drawing it across the back or any part of the body.

The Sponge Bath, like the full bath, may be given at several different degrees of temperature. The technique is practically the same. It may be given in bed or in a standing position, and consists of applying water to the surface of the body by means of a wet sponge or towel. The cold sponge is best given in the morning and after exercising. Here again the cold spray is recommended to the reader rather than the cold sponge. Ofttimes a sponge bath is given alternately; that is, first cold and then warm. The body is then dried and vigorous friction with a coarse towel is applied. It is best for the patient to stand in the tub and have the basins filled with water of the desired temperature, the one about seventy-five and the other about one hundred and twenty. The cold sponge is often used to reduce temperature in fevers.

When the warm sponge bath is given, vigorous friction is not necessary.

When the sponge bath is given in bed a rubber sheet is placed under the patient, the clothes removed and a woolen blanket thrown over the body. It is best to use fifty per cent. each of alcohol and tepid water at eighty degrees. The nurse then rapidly sponges the body, face, neck and extremities. The skin is dried with a soft towel and the clothes replaced. The sponge should be dipped in the basin frequently and not squeezed too dry. To secure the best results plenty of water should be applied to the skin. The body should be thoroughly protected with warm blankets and only that part that is being sponged exposed. If the entire body were exposed there would be danger of the patient taking cold from the unequal chilling. The sponge bath has a tonic and stimulating effect. When it is employed to control the temperature the bath is generally used as cold as can be borne by the patient, and in that case it requires more time than when simply used as a tonic. The sponge bath for fever is often given in the tepid temperature; that is, from seventy-five to ninety-five degrees.

The Spray Bath is one of the most useful methods of giving tonic effect. Certain apparatus is necessary that the water may be thrown on the surface of the body in fine divided streams. Shower and needle baths are gen-

erally found in houses of the wealthy, but for those who cannot afford the expensive apparatus there are a number of cheaper outfits that answer every purpose. An

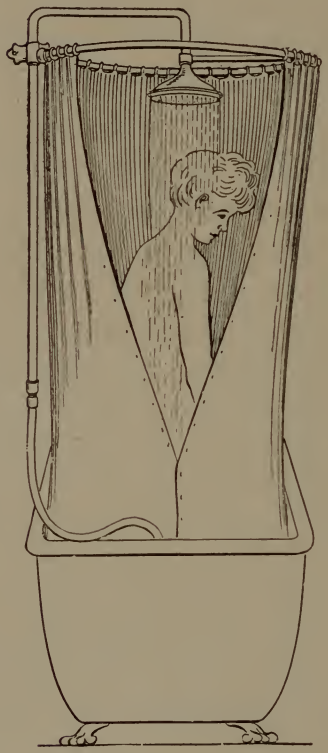


Fig. 121—Showing a spray apparatus with rubber sheet attached. (Ashton's Practice of Gynecology.)

adjustable spray, as illustrated in Fig. 120, is attached to the bathtub and the hot and cold water mixed as desired. A spray apparatus with a rubber sheet attached, as illus-

Fig. 122—This illustrates the Home Needle Spray attached to the bathtub. It gives a very fine spray and is under perfect control so that the temperature of the water can be perfectly regulated.

trated in Fig. 121, is inexpensive and very effective. The Home Needle Spray, which is illustrated in Fig. 122, is the cheapest and best apparatus of the kind that we are familiar with. It may easily be attached to any bath-tub.

In houses which have no running water the spray can be administered as illustrated in Fig. 123. In this case the patient stands in an ordinary washtub and the rubber bag or reservoir is filled with water of the proper temperature and suspended from the wall the same as the douche bag. The spray is then directed against the surface of the body as desired. The value of the bath depends upon the force and temperature of the water. For this reason we are much in favor of the Home Needle Spray, Fig. 122, as it can be perfectly controlled. The height of the bag will diminish or increase the force as desired.

The spray is of a tonic nature and should be taken on getting out of bed in the morning. The temperature of the water should be from fifty to eighty degrees. No other bath is so invigorating and from no other can such splendid results be obtained. It may be given in all temperatures of water, and it is useful to both the sick and well, the strong and weak, and to all who would gain and retain perfect health. It stimulates the circulation, sends the blood bounding through the veins and

freshens and stimulates the entire system. Women who are inclined to be a little sluggish and do not feel extra

Fig. 123—Showing how the fountain syringe and sprinkler are used as a substitute for the spray bath when the home is not supplied with running water. (Ashton's Practice of Gynecology.)

well will derive great benefit from the use of the spray bath every morning. Figs. 121 and 123 are more in the

order of a shower than a spray. When using the substitute for the spray as illustrated in Fig. 123, it is necessary that a nozzle like the one in Fig. 124 be attached to the fountain syringe and the water prepared in the basin and then poured into the bag. The entire body should be treated with the spray and the duration should not be more than a few seconds. It must be fol-

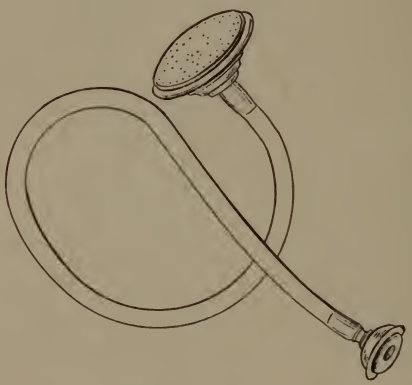


Fig. 124—The adjustable spray which should be used in connection with the fountain syringe. (Ashton's Practice of Gynecology.)

lowed by vigorous friction with a coarse towel. When using the Home Needle Spray the patient should turn around three or four times, which will be sufficient when using the cold spray. This is much better than a cold sponge or a cold full bath. The spray can be used at any temperature that is desired, from hot to cold or vice versa. It should last only a minute or so, alternating

first from cold to hot. Any temperature of the spray should be followed by a vigorous rubbing with a coarse towel.

The Sitz Bath.—When a woman desires to take a sitz bath she must have a special form of tub, as illustrated in Fig. 125. The water should be on a level with the umbilicus when the patient is sitting in the tub, and

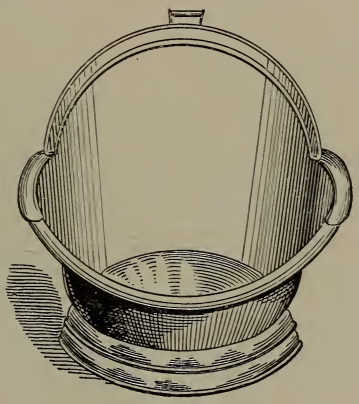


Fig. 125—Sitz bath tub—Ashton Practice of Gynecology.

she should have a blanket thrown around her to protect her from exposure. The sitz bath is stimulating to the pelvic and abdominal organs if it is taken at a low temperature, and it is a pain reliever when taken hot. The cold sitz bath is generally taken in the afternoon, the duration being from ten to twenty minutes. The

patient should be quickly dried and allowed to rest for an hour before being dressed. The best time to take the hot sitz bath is just before going to bed, as there is no need for any exercise after the hot bath. The tempera-

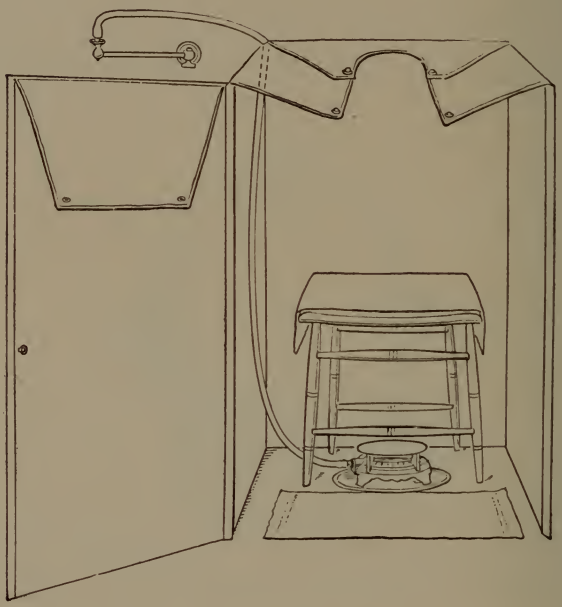


Fig. 126—This shows the cabinet and apparatus necessary for taking a Turkish bath at home. (Ashton's Practice of Gynecology.)

ture should be from one hundred and four to one hundred and twenty and the bath should last half an hour, as the object is to relieve congestion or pain in the pelvis. The patient should be quickly dried and placed in bed,

no rubbing being required in this case. The sitz bath is also employed in cases of painful menstruation.

The Turkish Bath.—In order to take a Turkish bath certain paraphernalia is necessary if one wishes to take the bath at home instead of at the regular Turkish-bath houses. But few are so equipped that ladies can attend, so it is best to have an outfit that can be used at home.

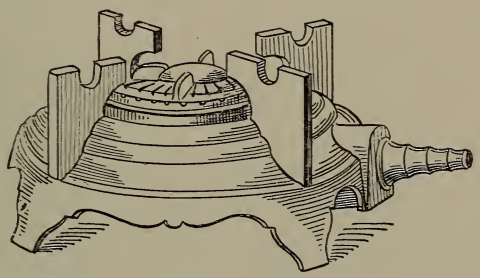


Fig. 127—The style of gas stove used for heating the Turkish bath cabinet. (Ashton's Practice of Gynecology.)

Fig. 126 illustrates a cabinet that is especially built for this purpose. These cabinets are very serviceable and answer every purpose. Fig. 127 shows the style of gas stove that supplies the heat. The alcohol lamps are somewhat dangerous and should be handled with great care. Those whose houses are supplied with gas should purchase one of these small gas stoves, which are very cheap, and use it in place of the alcohol lamp. A wooden

kitchen chair should be placed in the cabinet, a pad of asbestos placed under the chair, and the stove connected with the gas burner should be placed upon the pad. Another round asbestos pad is placed on the stove. A

Fig. 128—Illustrating method of giving a sheet bath. (Ashton's Practice of Gynecology.)

towel is now folded on the chair and another on the floor for the feet to rest on. In many cases it is well to have a basin filled with hot water in which to place the feet while taking the sweat. The amount of heat can be

regulated when the gas stove is used, which is not the case with an alcohol lamp. The cabinet should be heated ten or fifteen minutes before getting in. It is well to drink two or three glasses of water before entering the cabinet. Remain in fifteen to twenty minutes. Place a towel which has been wrung out of cold water around the neck to prevent the hot air from striking the face. Immediately after getting out of the cabinet take a spray bath at a temperature of one hundred to one hundred and twenty degrees. This should last only a minute or two. Then change to a cold spray for a few seconds. Dry the skin with a coarse towel and lie down and rest for an hour, or go to bed if the bath is taken at bedtime, which is best. No exercise is necessary. After the patient is in the cabinet a few minutes the perspiration will appear and in a short time be very general. The duration of the bath varies in each case. Some women require a longer time than others to produce free perspiration, but if the patient is strong enough to stand the heat it should be continued until the sweating is very profuse. Yet, if at any time there is a feeling of fullness, throbbing in the head, palpitation of the heart, or a faint feeling, the patient should get out of the cabinet at once. A cold cloth applied to the head will ofttimes prevent such unfavorable symptoms and make the patient feel quite comfortable. The frequency of the Turkish bath

depends largely upon the condition of the patient, but the average woman should take one once a month. It is a good eliminator of poisons from the systems and keeps the pores in good condition.

The Sheet Bath is given as illustrated in Fig. 128, and is used as a stimulant and tonic. Women who are physically and mentally exhausted will receive great benefit from this sort of a bath, which should be given in the following manner: A washtub or bathtub should contain a sufficient amount of water at a temperature of fifty to seventy-five degrees. A muslin sheet and towel are immersed in the water. The patient stands beside the tub and the nurse takes the sheet out of the water and quickly wrings it dry and wraps it completely around the patient's body. She then wrings the water out of the towel and rapidly slaps the entire surface of the body with it. The strokes should be quick and sharp and kept up two or three minutes. The sheet is then removed, the skin dried with a coarse towel, and the patient wrapped in a woolen blanket and allowed to rest for an hour. This kind of bath should be followed by a general massage if it is possible to afford it.

CHAPTER XXV.

WATER DRINKING.

The subject of water drinking is neglected both by the laity and physician. The importance of water in the treatment of diseases and as a part of the diet is frequently underestimated. Patients are seldom instructed as to the amount of water to drink, its temperature and its effect if taken with the meals or on an empty stomach.

Water flushes the entire system by increasing the quantity of the urine, stimulates the action of the bowels, increases perspiration, assists in throwing off impurities from the lungs and puts them in a condition to more readily receive oxygen. As a result of these impressions upon the organs of the body in the process of elimination and throwing off waste matter in the tissues, lime and other salts are removed. These results depend not only on the quantity and quality of the water (important factors), but upon its temperature and time when taken into the stomach. The general effect of heat and cold are identically the same whether applied externally or internally. Thus, we find that when we drink hot or cold water the effect is exactly the same as if cold or heat were applied to the skin.

QUALITY.

All drinking water should be pure and should contain no infection in the form of germs or mineral salts. Many fevers result from the use of impure water. The fact that water has been boiled and that it is free from material of an infectious nature does not make it of a high quality.

The purer the water the greater its absorbing power, and consequently it carries off a larger amount of impurities through the excretory organs. Hard water, because of its limited absorbing qualities, is of little use.

Contrary to the general idea, all the mineral salts nesessary to the preservation of health are contained in food substances. The amount of harm done by mineral matter is water is incalculable. Lime deposits are formed in the tissues. The excretory organs are locked up, so to speak, because the liver and kidneys cannot perform their functions properly.

Many persons deceive themselves by the use of a filter. This custom cannot be too strongly condemned. Mineral salts are held in the solution, and, too, if the filter is not kept perfectly clean it becomes a source of germ infection.

The ideal drinking water is the distilled water. It is absolutely pure, does not contain any poison, is free from all mineral matter and has a great power of dis-

solving and absorbing waste matter with which it comes in contact in circulating through the system. It has been put to a practical test. It has been used by men of the American army and navy for years and the sick rate has decreased to a marked degree.

Everyone should distill the water for his own use at a nominal cost, and in the end it would be much cheaper than being a victim of any of the diseases that come from improper care of the body. There are water distillers on the market that are very simple in construction and can be obtained at a nominal cost. If it is impossible to obtain distilled water, use one as free as possible from germ infection and mineral salts. Some of the natural waters that are on the market contain a very small amount of earthy matter.

QUANTITY.

The average individual in normal health should drink at least one quart of water each day. The system will often demand twice the amount. Every woman should practice and form the habit of drinking a glass of water immediately upon getting out of bed in the morning and just before retiring at night. If it is taken into the stomach in the morning it washes out the mucous, stimulates the action of the intestines and improves the appe-

tite and general tone of the entire system. It is best not to take too much liquid with the meals, because a large amount dilutes the digestive fluid. If taken cold, as ice water, it will have a tendency to cause indigestion. It is important, therefore, that the largest amount of water taken during the day should be when the stomach is empty. A period of two hours after meals should be allowed before much water is taken into the stomach. It may be taken a short time before meals, as it rapidly absorbs and does not mix with the food that is taken shortly afterwards. The quantity and temperature of the water, as well as the time of administration, must be regulated by the condition and peculiarities of the case. When hot water is used to aid digestion it must be taken one hour before meals and as hot as can be borne. We have learned in a previous chapter that one of the causes of constipation, with its evil effects, is the lack of the proper amount of water. Therefore, we advise you to drink a sufficient amount of water to carry off the waste matter. Keep the internal organs as well as the external surface clean and regard water drinking of as much importance as the bath.

CHAPTER XXVI.

THE WOULD-BE DOCTOR.

The term doctor is frequently misapplied. It is appropriated by persons who have given a slight amount of study to any one of the numerous branches of medicine. The real physician must have become master of the whole field of the science of the treatment of disease. A close student and a keen observer, he must have the facilities to put his knowledge to practical use. By no means are these qualities required from the number who administer to the ills of the unfortunate today.

New methods of treating diseases spring up like mushrooms. The practitioner may be a regular or an eclectic, a homeopath or an osteopath, a magnetic healer or a chiropractor. Whatever the branch of medicine, there may be found in it illiterate persons or those of a very limited education.

Every doctor, regardless of the school he follows, should be frank and honest with his patients. If he is not sure of his diagnosis or does not know what is the matter with his patient he should be man enough to acknowledge the fact. If honesty were only practiced it would eliminate much of the prejudice which exists among the laity against the profession today.

Medicine and surgery have made a wonderful advancement in the last few years. The advancement has not come from the quack. As we realize the greatness of the profession, we cannot fail to recognize its abuse. The laity should learn to distinguish between the real doctor and the pretender. We are not pleading for any special line of treatment, but we do demand honest and conscientious treatment. Then the laity will appreciate the efforts that are being made for their benefit. They would not be so foolish as to allow suggestive therapeutics (we should say Christian Science) in the treatment of diphtheria instead of the prompt use of antitoxin.

There is another class who consider themselves as doctors that women should be cautious about employing. They are women who consider themselves midwives and thoroughly competent to take care of confinement cases. Confinement cases are extremely difficult to manage at the present time. Midwives often attempt to handle complicated cases, with the result that the patient's health is permanently injured. Several times we have been called in consultation after the patient had been in labor for some time, often as long as from thirty-six to forty-eight hours. In these cases some abnormal condition exists which a midwife is not able to diagnose, nor would she be able to manage it. Nine times out of ten her education is very limited—as nothing compared with

that of the trained nurse. If complications are present or arise during a confinement, the midwife is not master of the situation and the patient must suffer the consequences. The most skilled attention should be received by confinement cases.

A frequently met variety of would-be doctor are the busybodies who think they have a great knowledge of medicine and the ability to cure disease. They interfere with the commands of physicians and dictate to patients a proper treatment of the case, telling them that "such and such a treatment cured so-and-so and her sickness was just like yours." Were the symptoms of a directly contrasting nature the treatment as prescribed by this "would-be doctor" would be the same. No sickness that afflicts the human race is too complicated for the "best cure" given by them. Often when the family physician is treating a patient the friends or relations will ask, "why don't they do this or that? Why don't they get this doctor or that doctor?" In all probability the family have a physician employed who is prescribing the very best treatment that can be given. Such interference on the part of the "knowing individual" and friend of the family is detrimental to both the patient and doctor. The patient becomes dissatisfied with the treatment, feels discouraged, and is gradually made worse by such meddlesome individuals.

To conclude. A college education and a four years' course in a first-class medical school is a necessary preparation for the practitioner. Competence should be the unfailing qualification of the healer of human ills. Too serious matters are life and death to be tampered with by dishonest or incapable persons. Put the weight of responsibility upon shoulders able to carry it. Above all, do not meddle—in this case at least "silence is golden."

CHAPTER XXVII.

WHEN TO CONSULT AND PAY A PHYSICIAN.

Sickness is the common lot of humanity. No class or race is exempt. All women at some period of their existence suffer from some malady peculiar to women, and it is safe to say that no matter how wise the world may grow or what perfection science may reach, the sick, like the poor, will be always with us.

The old saying, "A little neglect may breed great mischief," applies with greater force in diseases of women than anywhere else, for a neglected ovarian or uterine trouble may undermine the system and lay the foundation for a serious or chronic disease. It seems the height of folly for a woman to wait months or years until the disease is well established before consulting a physician, and then expect to be cured with a few doses of medicine and an occasional office treatment; yet this is exactly what most women do. No one can tell what will be the termination of an attack of inflammation of the pelvic organs. A seemingly slight ovarian trouble or a displacement of the uterus, if neglected, may cause the parts to become so diseased that if it does not end fatally it may result in a protracted attack of sickness often requiring a serious surgical operation which may leave the

patient in a debilitated condition, with the health permanently impaired.

The lesson taught by these cases is to consult a competent physician at the earliest possible moment. Most women hesitate over the expense, but a little reflection would show them their folly and lower expense. A physician consulted early in the case is able to restore the parts to their normal condition in a very short time, and the expense is nominal compared to that of neglected cases which require hospital care and the inevitable operation. This is all additional expense, to say nothing of the danger, suffering and anxiety. Many women who are ill will say, "Oh, I have taken treatments from doctors, but it never did me any good." Well, did you follow his instructions, or did you stop taking treatments as soon as you began to feel a little better? Then in a short time when you felt as miserable as you did at first, say unkind things about physician number one, and go to number two? Such a patient goes the rounds and finally both patient and physician become disgusted. The patient is not well, and the chances are the doctor has not been paid for his services. The way to obtain results in such cases is to continue the treatments under the physician of your choice long enough to effect a complete cure, or, if it be necessary, submit to an operation.

Talk over money matters with your physician, as

well as your illness, and this will insure prompt attention and the very best service. Some people think a doctor can wait, or should wait indefinitely. When the bill is presented they become angry at him. Doctors' services should be paid for in cash, just as cash is paid for goods handed over the counter. No one, especially a stranger, would buy a bill of goods from a merchant and take them away without paying or making arrangements to pay for them; yet many people employ a physician without making any arrangements about the pay.

Doctors, as a rule, are poor business men, too sympathetic, and allow themselves to be imposed upon time and again. Suppose a patient is not well fixed financially and sickness comes. If the doctor's bill is necessarily large and the patient has no ready money, he should make arrangements with the doctor to pay a little at a time, no matter how small the amount. The little things make large ones, so a little paid on the bill now and then soon pays it and thus insures the doctor's best efforts and his continued service should it be needed.

There is one time when money should be ready, The Confinement Case. The parties know that at the end of a limited time a doctor's services will be needed, and the time is ample for preparation and getting the fee ready; and the responsibility is so heavy, the danger to mother and child so great, that in the near future no

reputable physician will take any case where arrangements have not been made beforehand, as there is absolutely no excuse for not being prepared.

Then the choice of a physician and the respect you show him is a matter of extreme importance. You will select a man from the medical profession whom you feel honors your home when he enters it, and with whom you can trust yourself under all circumstances. Do not employ a cheap doctor; cheap things are dear at any price. You want a conscientious, upright man of experience, one who has studied long and continuously, who buys the latest books and instruments, best journals, and in every way keeps up with the advances of science. This man cannot practice as cheaply as the man who does none of these things. Do not employ a physician who says unkind things about his fellow practitioners. Any doctor who talks about another doctor's shortcomings is not a safe physician for you to trust. Use good judgment in selecting your physician, then be honest with him. If he has your case under treatment and you are not getting well as fast as you think you should and want to have a consultation, tell your physician and make the necessary arrangements. Do not call in another doctor and say nothing about it to the one in charge of the case. Then again, if you want to change doctors tell your physician so, pay him what you owe him and

discharge him honorably; in fact, treat him just as you yourself would like to be treated.

"HEAVEN ENUF FOR ME."

"Last evening I was talking
With a doctor, aged and gray,
Who told me of a dream he had,
I think 'twas Christmas Day.
While snoozing in his office
A vision came to view:
He saw an angel enter
Dressed in garments white and new.
Said the angel, "I'm from heaven;
The Lord just sent me down
To bring you up to glory
And put on your golden crown;
You've been a friend to every one
And worked hard night and day;
You have doctored many thousands
And from few received your pay.
So we want you up in glory,
For you have labored hard,
And the good Lord is preparing
Your eternal, just reward."

"Then the angel and the doctor
Started up towards glory's gate,

But when passing close to hades
The angel murmured, "Wait;
I've got a place to show you;
It's the hottest place in hell;
Where the ones who never paid you
In torment always dwell."
And behold, the doctor saw there
His old patients by the score,
And grabbing up a chair and fan,
He wished for nothing more;
But was bound to sit and watch them
As they'd sizzle, singe and burn,
And his eyes would rest on debtors
Whichever way they'd turn.
Said the angel, "Come on, doctor,
There's the pearly gates to see."
But the doctor only muttered,
"This is Heaven enuf for me."

CHAPTER XXVIII.

PATENT MEDICINE.

We wish to say a few words about patent medicines that are prepared especially for "Female Weakness." They are the worst enemy of the woman who takes them and the best friend of the physician who makes diseases of women a specialty. Women buy medicine of which they know little or nothing and pour it into their bodies (of which they know less). They will try to cure displacements of the uterus or a torn cervix with medicine which does not benefit them but undermines the health until the system falls a prey to any disease. Medicine thus taken has very little, if any, good effect. Its continued use by its action upon the pelvic organs will affect the mind.

The patient is usually weak mentally and physically, lacking power to withstand the strain of overstimulation. The more and longer the medicine is taken, the weaker the patient becomes, and the case the more difficult to cure.

Many suicides, sudden and mysterious deaths, heart failures and sudden shocking crimes from so-called temporary insanity are the results of the use of patent medicines.

Things have reached such a state that the attention of the government has been called to the evil effects of patent medicine. Better class newspapers and magazines are not only refusing their advertisements, but have begun to expose materials and methods used in their manufacture. The large number of women who suffer with some pelvic trouble are being gulled in an astonishing manner, and millions of dollars are being spent every year for such medicines and thousands of lives sacrificed directly or indirectly.

Suitable laws regulating or stopping the sale of such medicines should be passed. It is a blot upon our fair land and it is up to the people to stop it. Many of them contain alcohol, opium, chloral and other dangerous drugs, and they are many times the cause of the drug habit.

CHAPTER XXIX.

MARRIAGE.

The word marriage is significant of the most intimate relations between man and woman. A ceremony of church or state legalizes a union, with a community of interests, mutual love and sympathy, and the right of sexual relationship.

The ruling impulse of mankind is the establishment of a home. Indeed, of such power is the impulse that one of our greatest writers has said that "the whole history of the human race can be traced to the sexual instinct." Marriage is the normal state. The mind of man or woman may be concentrated upon other interests, but the awakening to the dominant instinct is inevitable. Many a person has foregone marriage for the pursuit of art, literature or science to be the victim of unceasing regret. Especially is this true of woman. In the words of the poet,

"Man's love is of man's life a thing apart;
'Tis woman's whole existence."

Not that man loves less sincerely than woman. Marriage should be as much to one as the other. As Walling says, "The union of two moral and intellectual beings, linked by a pure love, in conjugal relation, is a sublime conception of Christianity and civilization." There must

be harmony in temperament, education and custom. Marriage without harmony is a failure, if not a crime.

Young persons enter matrimony thinking that nothing can mar the bright and promising future. The solemn joy of the nuptial service impresses them with little of the real seriousness of life. The wedding bells ring merrily while conjugal vows are taken lightly, with no thought of their meaning. Parents and friends look on approvingly, rejoicing in "Love's young dream," forgetting that marriage is very far from a dream.

A few months pass by. The honeymoon has lost much of its golden glory. The little differences that gnaw at the roots of even the sturdiest affection have done their work. The tempers of husband and wife clash bitterly. Friends and parents cannot understand. They refuse to listen to the pleadings of a broken heart. It is not difficult for the keen observer to tell where the trouble lies. Entrance into marriage without any consideration of mutual fitness can be productive of nothing but unhappiness. No law or religion can ever restore lost affection.

These persons were happy, contented and good before marriage. Does the fault lie with them? Frankly, we say no. Little can be expected of a union when the contracting parties are ignorant of themselves, each other, and life in general. A meeting in a ballroom or

at a pleasure resort is not conducive to a clear view of the other's personality. The further meetings at social functions and at other times when the best clothes and behavior are donned do not admit of any real knowledge of the beloved.

The woman who contemplates wifehood should comprehend the meaning of the word wife. She should see life practically, a place where work and duty are made sweeter by the existence of love. She must be man's co-laborer. His toil as well as his pleasure must be shared. By no means will the task be an easy one. Industry, courage and self-reliance are necessary requisites of the noble wife.

The man should be made to realize that his wife is his equal. Too often does the husband regard his helpmate as a cook, nurse, seamstress and common drudge. He forgets that she has rights, that she is entitled to exact from him what he does from her.

The chief object of marriage is the foundation of a home. The wife must realize that home and children are more important than social gayety. The husband, that there are things of greater importance than business activities. Parents should realize that the desire for marriage is innate in the human breast and that their children should be taught to look upon the building of a home as the highest aim in life. The son or daughter

thus reared will come to his father and mother for counsel before making any serious step in life.

If a man is qualified to support a wife in a manner suitable to their station in life, he has the right to demand of her economy and thrift. Too often does the mother boast of her daughter's inability to "keep house." "The flower of the family" has been too "lovely and choice" a product to learn the meaning of work or trouble. The mother asks of her son-in-law that he take upon himself a double responsibility. "See that you make her happy." Does the fond mother forget that the wife must endeavor to make the husband happy as well? All credit to her who can truthfully assert her daughter's fitness as a home-maker! All credit to her whose wise teachings have given unto the man a wife who knows the meaning of marriage and responsibility! That her daughter is a good worker, an economical shopper, a careful manager, is greater glory to her mother than that her child has been the greatest beauty and social belle of a community. Truly great persons live their own lives, finding greater pleasure in the home circle than in the realms of "society."

Of even greater importance to marital happiness is health. Housekeeping can be learned, but a perfect physique must be acquired in childhood. Neither man nor woman should marry unless he or she is physically

sound. Hereditary disease is one of the greatest curses of mankind. Persons afflicted with consumption, scrofula, or syphilis have no right to inflict their suffering upon their helpless offspring. Worthy of praise is the action of those state legislatures which demand a health certificate before the issuance of the marriage license. Neither money nor social position can compensate for inherited disease.

The Sexual Life of Both Sexes.—The sexual passion is a natural one, not to be considered as found among the degenerate, but as it exists among the cultured and refined. With other instincts in life, it gives noble ideas and a desire to live for all that is beautiful. It is a powerful stimulus, elevates life to its highest duty of love and kindness. An eminent writer once said, "If man were robbed of sexual desire and everything mentally connected with and emanating from the same, almost every vestige of poetry and perhaps all moral sentiment would be torn from his life."

Persons who are narrow minded, phlegmatic, cold, ascetic, or otherwise abnormal, may condemn such teachings and say all things sexual are vulgar and disgusting. Such persons are more to be pitied than censured, for they know nothing of nature's laws and requests.

True humanity demands a scientific discussion of sexual life. If much of the existing disease, unhappiness

and suffering is to be obliterated, the ignorance of the laity must be changed to knowledge. The laws of nature must be explained so that every man and woman may understand the importance of a thorough knowledge of life and sex.

Sexual desire is a necessary and natural law of love uniting the opposite sexes in the most intimate relations. It attracts men and women to each other with the strongest of all passions and is one of the beautiful phenomena of life necessary for the creation of new beings. Yet we would not have you think that the first thought of sexual desire is to create children, but it is the love and sympathy for each other which manifests itself in sexual life. It teaches that propagation is not the only purpose of sexualus, for without love and personal sympathy sexual desire becomes a physiological gratification and nothing more.

The suppression of the sexual desire in women as taught by Christian churches in the olden times was a false conception of the natural laws, and is condemned today by thinking and educated people. One should remember that sexual life is in harmony with a noble mind. It is also recognized as an important factor in normal organization as well as health. The human being needs love, joy, sacrifice and pleasure. Without it there is nothing in life. Yet our education along this line should

be for the good and pure, for love reigns forever. The poet never forgets to paint a beautiful picture in words for this desire for love. He sees it in all its beauty. "Thou, oh love, art indeed the eternal." Then we see before the artist his masterpiece, a perfect body which represents health and beauty.

As we have said before, the teachings of the church often endeavor to force women to suppress this sexual instinct and consider her only function to be that of bearing children. Some authors give the reader the impression that man's motives are simply from a physiological point of view and woman's that of motherhood. Both statements are either erroneous or false. Mrs. Schoenflies, a Philadelphia woman, says that a woman who loves a man and surrenders herself to him thinks of him alone and not of the child which may be the result of their union and which is only secondary in a woman's normal love connection.

Men and women are born with these natural sexual desires and they should exist in a normal and moral condition. True, Christianity, education and morality are its safeguards. Both sexes are virtuous when they know the morality of sexual life and understand its meaning. Dr. Nystrom, of Stockholm, Sweden, who has done so much to educate the laity on this subject, says in one of his books, "The Natural Laws of Sexual Life," when

speaking of the moral sexual life, "We must make earth an empire of love where happy and healthy people enjoy their existence and work and sing with overflowing love of life, where the mind is open for all that is beautiful in this world, for the greatness and truth, and the heart vibrates with joy and love. This is the law of life; this is morality."

In olden times Christians tried to improve the immoral conditions by trying to subdue the sexual passion and by fighting prostitution. They used all sorts of ways and means to destroy the sexual passion, but they could not succeed in their severe demands. Nature's laws would exist in spite of all efforts from that day to this. Christianity has done much in improving the moral conditions, but there is still room for improvement.

Let the husband and wife unite in studying this question of sexual life honestly and truthfully and from a moral standpoint. Then it will be understood as it should be, and then your daughter and mine will have the proper protection. This chapter does not permit the space to go into detail as to the old religious teachings of "self-denial." To repeat the saying, "Judge not and you shall not be judged," is sufficient. All persons are not alike sexually. To use common sense is the best method in the regulation of sexual life.

A true recognition of the beauty and morality of

sexual life can be brought into the lives of every husband and wife—making every American home purer and happier.

Physiology and Effects.—The development of the sexual organs in the woman has been fully considered in a preceding chapter on puberty. A change occurs in man as in woman, though generally a few years later—usually in the sixteenth or seventeenth year. At this time the will power becomes especially developed and the secretion of the spermatozoa takes place in the testicles. Parents should realize that this is the critical time in a boy's life as well as in a girl's. Character is moulded, the sexual life begins with its sensations and emotions, and the opposite sexes are especially attracted to each other. Dr. M. A. Wickard, the noted German author, says, "It is a known fact that the spermatic fluid is secreted from the blood of man's sexual organs as soon as he reaches a certain age. We know this causes the greatest actions in the body. As soon as this secretion occurs a young man totally changes. His voice gradually becomes deep and manly, hair grows on his face and genital organs; his limbs grow more powerful and muscular, he becomes more fit for thinking, his intellectual powers increase, he grows more courageous, and feels an almost unconquerable desire to have intercourse with the opposite sex. It is also a known fact that the seminal

fluid is a daily means of recreation and sustenance of the male sex, that it sustains the vitality, vigor and temperament, that men who are always happy and jolly through life and live to an advanced age are men who always have been sexually strong." Therefore, it cannot be denied that men who are normal sexually are cheerful and sympathetic men, hard workers and good thinkers.

The cause of the sexual desire or appetite is due to the filling of the sexual glands with a spermatic fluid which causes a peculiar stimulation to the entire nervous system. The gratification of the sexual desire relaxes the nervous tension.

The sexual act in both sexes depends upon a reflex stimulation from the genital organs and the brain. The action of the brain can either excite or control these reflexes. Specific sexual energy is nothing more than the mind and central parts of the brain acting upon the genital organs through a stimulation known as nerve vibration.

Some contend that as soon as a boy reaches manhood and a sexual desire is manifested, with an involuntary escape of the seminal fluid during sleep, sexual intercourse is necessary to preserve health and prevent masturbation. We are sorry to say that few boys escape this detestable habit; however, cultivation of the mind and the development of the faculty of self-control will

enable any member of either sex to desist from masturbation or intercourse.

The brain and nervous system are influenced by the sexual organs during sleep. This is proved by the fact that emissions of the semen (a voluntary act during sexual intercourse) occur involuntarily at night once or twice a month in healthy men. Single men who live the ordinary life of today will have these emissions and should not be alarmed or become melancholy or anxious about their condition.

In classifying different individuals, we find some who have no sexual feeling and desire. Such persons are "Cold Natures." This indifferent condition is found more frequently in women than men. Men so affected generally spend all their time and energy upon scientific subjects. Their minds are totally concerned with abstract things; they have no other interests and soon become inactive and "cold sexually." True, overstudy and too much brain activity on any subject will cause the same abnormal condition in men. A faulty education and the teachings of cold and indifferent mothers are the causes of a great many of the cold natures in women. Such women are totally indifferent and possess no feeling whatever during sexual intercourse. They come into this world, live by eating and drinking and without the sufficient amount of sunshine, love or sym-

pathy to make their pathway through life brighter. Persons of this type imitate and follow the examples of others, never rise above the regular routine of every-day life, intellectually are not investigators, and never become leaders or rulers. Such married women abhor sexual intercourse with their husbands and treat it with the utmost disgust. When such acts do occur they feel that they are doing their duties towards their husbands, but to their minds it is sinful and wrong. Such a wife never satisfies a husband's desire for love, sympathy, and affection. It is not altogether just the act; something more is needed to make it complete; the whole body and soul must unite to bring forth love and sympathy that each can say to the other, "There is no one in all this world but you."

When the sexual desire is destroyed in a man who was perfectly normal before the disease or accident that caused such condition he becomes depressed, loses will power and energy; worries continually about his hopeless miserable condition, seeing no future, no hope. So we can truthfully say that a lack of sexual desire robs life of its happiness. This is true of both sexes.

The sexual desire may remain normal in both sexes until late in life. In some cases women years after the menopause, even to the age of seventy-five, have had perfect sexual desires, and men at the age of eighty-five have become fathers.

Sexual life may also manifest itself quite early in life, long before the genital glands are active. It may occur in both boys and girls as early as the third year.

Sexual desire varies greatly in both men and women. Variations may occur in the same individual at different periods of life and under different conditions. The general health has a great deal to do with the desire.

There is no fixed rule with either sex as to the frequency of intercourse during married life without being detrimental to either husband or wife. It is best governed by the physical and mental condition. If there is a fatigued feeling accompanied by headache, slowness of the intellect, and a general depression of the nervous system, the sexual act should not occur so frequently. Once or twice a week is considered normal for the average person in perfect health. If he is very strong sexually and in robust health it may occur more frequently. The future health must be considered. Patients who consult physicians late in life for impotency, general nervousness, and a complete breakdown are those who usually give a history of having had intercourse or masturbated very frequently for years during their early life. This abnormal increase of the sexual appetite is found early in life more frequently in men than in women and when it is gratified daily as reported in some cases it sooner or later ruins the health. Such

patients become dizzy, have more or less headache, are unfit for work, and the vitality of the system becomes so low that they are susceptible to any disease.

A lack of gratification of the sexual desire after marriage will cause a breakdown in health similar to the excess. Married women who are neglected by their husbands, or perchance are widows, suffer to a greater or less degree from enforced abstinence. Such women sooner or later become neurasthenic and ofttimes hysterical. Cases are reported where the same condition caused melancholia and female diseases. The sexual appetite in young women ofttimes does not manifest itself until after it is created by man,—that is, by the sexual act. It may be weeks or even months after marriage before the desire manifests itself. Again there are certain unmarried women with a sensitive instinct who enjoy a perfect physical and mental condition where sexuality is present. In other cases intercourse has developed a certain condition and abstinence will cause serious mental derangement. In such a case any irritability of the sexual organs causes a most perceptible shock. By this we refer to young girls who have given birth to a child by a promise of marriage or who have given themselves up to a lover who has afterwards deserted them.

Another condition that will cause female diseases and pelvic congestion is incomplete intercourse. This

happens when the act is not in harmony with both parties; that is, either husband or wife does not experience normal sexual intercourse. A woman is not affected if she has no sexual instinct. In some marriages where young women have married elderly men who are weak sexually they have become mistresses of other men. Upon the other hand where there are cold natures existing in either sex the opposite has not fallen or become faithless. We often hear of such parties contemplating and sometimes committing suicide. Men are often weak sexually because they live too fast a life while single. In such cases we often hear complaints from the wife. Incomplete sexual intercourse is often practiced to prevent pregnancy and the result is pelvic congestion, and painful menstruation which will finally result in ill health. When there is a lack of proper sympathy and affection manifested upon the part of the husband there is often a lack of complete sexual relations on the part of the wife, as she must be approached with a tender and sympathetic attitude. Without such relations the woman will suffer the results. If real love is present, mutual harmony will result in what is termed perfect sexual life.

In women during sexual intercourse the tubes, ovaries and uterus become congested and if they remain in this condition without the natural crisis being reached

various pelvic disorders will be produced; the parts will become swollen; catarrhal conditions will develop; hemorrhages will occur and changes will take place in the pelvis which will result in a complete break-down in a woman's health. Man should be instructed in regard to this fact as he may not be aware of the injury he is doing. Patients suffering from incomplete sexual intercourse often consult a physician. Owing to the modesty of the patient in not telling him of the relations existing between herself and husband the physician is not made familiar with the cause of such a condition. Women should be frank about such things in order that they may receive the proper treatment and prevent future suffering and misery. Like ill results will occur in men who practice incomplete sexual intercourse for the purpose of preventing their wives from becoming pregnant.

It is one of the impossibilities so far as the health and mental development are concerned for married men who are sexually strong to abstain.

Men who abstain from such relations for a longer or shorter period of time and then indulge to an excess, as they generally do, will suffer from the disastrous results later in life. In such cases the love of life disappears, the intellect becomes inactive, the physical condition is impaired and the patient becomes melancholy and depressed and perhaps insane. Unmarried men and wom-

en who have never had the sexual appetite gratified are in a position to abstain with a much less degree of resistance and without experiencing the ill effects upon the system that are the result of abstinence after marriage. This refers especially to women. Men who abstain from sexual relations without any ill effects are men who are weak physically as well as sexually and whose general constitutions are far below the average. Too long abstinence may lower the vitality of the sexual organs to such a degree that impotency may result. The immediate effects of ungratified desires in men are headache, a general tired feeling, a lack of ambition, loss of appetite, sleeplessness and inactivity in their avocations. Men suffering from these conditions are as bashful as women about giving their physician the exact history of their cases and consequently do not receive the proper medical advice. They may be treated for some sort of nervousness, the physician being unable to make out the exact cause of the condition. Both sexes should be perfectly frank with their physicians in regard to such matters in order that perfect health may be restored. Some authors claim that abstinence in men after marriage will cause them to become low in morals, dishonest, often developing a criminal tendency, and that crimes due to temporary insanity have been committed as a result. Therefore, a man of strong sexual appetite and a perfect body

cannot endure a prolonged abstinence without causing ill health and great suffering to himself, and those with whom he associates are in more or less danger. Men and women who have been privileged to marry and who abstain from such relations, even when the effort is comparatively easy, will sooner or later ruin the health and mental activity.

Married women often become physical and nervous wrecks from the brutal injustice imposed upon them by their husbands who ignore their rights. Such a husband is so selfish that he thinks only of his own pleasure and gratification in his sexual relations with his wife. Men often ruin the health of their wives by being devoid of the kind and sympathetic attitude at this time.

It is believed by some among the laity that normal sexual conditions must exist in a woman or she cannot become pregnant. This is false because wives have become mothers several times without having any sexual appetite. Many women marry without love and never have loved their husbands. In other cases the sexual desires of women are destroyed by men not properly understanding the sexual relations and who have not used the law of kindness, devotion and love. If both parties were only properly educated there would be less female diseases, fewer mental and physical wrecks and fewer unhappy unions and failures in life. Divorces and their evil effects would be lessened to a marked degree. The

high moral ideal of sexual life must be thoroughly lived up to if real love, kindness, sympathy, and devotion govern married life.

Morality.—Doubtless some of our remarks upon the subject of sexual life will be severely criticised. However, if you are fair-minded you will recognize the worth of our heart-to-heart talk even if you do not agree with our views upon the matter.

That you have tried to educate your daughters in the best way possible is a foregone conclusion. The average American mother sends her children to church and Sunday school. The average American child receives a fairly good common school education. In all respects but one is the rising generation at least fairly well schooled. It is the more pitiful a fact because upon this one thing depends much of the world's health and happiness. Instruction upon topics of sex is of vital importance to each and every man and woman. The relations that exist in marriage are too closely related to all life and human affairs to admit of any ignoring of them. The knowledge will inevitably come. It rests in your hands whether it be from the lewdness of associates, from the bitterness of experience or from the purity of a parent's love.

It is surprising that in our up-to-date recognition of the value of specialized training in the trades and professions, we fail to see that special training for matri-

mony may be conducive to domestic happiness. A person who has never studied music is not expected to master a difficult sonata; a young woman is not expected to make a dress without previous instruction. That she is allowed to enter upon a new life without a comprehension of its difficulties is your fault, not hers. Blame yourselves if her life becomes a failure. If you "can't see why things are as they are when you did everything you possibly could to educate her," question yourself thoroughly. Nine chances out of ten your daughter, if not absolutely ignorant of her duties as a wife and mother, has been taught in a perverted school.

Look into this matter honestly and sincerely. Are you one of those who desire to improve the moral conditions of society? Do you wish to make this a better, purer world for our daughters and sisters? Is it necessary that the sisters and daughters of others must live a life of prostitution to protect our family honor and decency? The case lies with you. If you educate your children purely, the degradation of the present time will gradually decrease.

The unequal standard of morality today is responsible for our greatest social evils. The man who freely indulges his amorous passions is warmly received by circles who spurn his victim as an irredeemably "fallen creature." He expects to marry a woman whose virtue is

unquestioned and whose purity is spotless. The woman takes what she can get—often innocently believing she is obtaining a "manly man." Nor is it all the man's fault. From time immemorial woman has been taught that her reputation depended upon her sexual purity. The principles of chastity are inherent in the generality of womankind. The boy is taught by older associates habits destructive to his moral nature. It is called a natural course where in woman it would be designated as depraved.

The cure can be accomplished only by the parents. A pure, sane view of life and its processes of regeneration must be inculcated into the growing boy. The consequences of sin must be taught. Let the child know what he should and should not do. Teach him that masturbation will ruin him mentally and physically; teach him that he should hold intimate relations with no one but his wife; teach him that sin brings in its train disease; teach him that each woman is or has been as sacred in the eyes of some man as his own mother is in his. Teach him that there is but one standard of right and wrong—that chastity is a jewel in the hearts of men as well as women.

Men, even as boys, seldom fail to recognize moral worth in women or girls. His respect is measured by her reserve. Moral scruples do not lower a woman in a man's regard. Nothing is so dear as the unattainable and the

woman who holds her purity inviolable raises her value in the eyes of him who would violate it. If she yields she faces great dangers. Nothing can compensate for the loss of her own self respect. She is scorned by both sexes. She runs the risk of being infected with gonorrhoea and syphilis. To hide an accidental pregnancy she may by a secret abortion destroy her own beauty and health and the life of her unborn child.

Sexual morality should be a quality of married as well as unmarried life. There exist unions in which the high standard of morality is shown by the husband's regard for the wife's wishes in all sexual relations. Such a man would look upon any enforced inclination to his desires upon the part of his wife as a transgression of the moral law. He realizes that feminine reserve is a protection not only for herself but for the race. Adultery on the part of the husband is common unless he has more than an ordinary sense of justice and develops human feelings instead of brutal instinct. Moral law restricts woman to a permanent mate; man hopes to find fuller pleasure in variety. The good woman has ever been in competition with the courtesan. Chastity must be supplemented by the arts of pleasing before it can hold the hearts of men. It is here that the good woman often fails. She endeavors to retain by tears and reproaches what is being led away by smiles and graces—and smiles

are far more captivating than tears. Matrimonial faithfulness and purity are her greatest aid, but as little faults often blind us to great virtues, so man loses sight of his wife's chastity in her very apparent hysterical tendencies.

You ask how we would prevent prostitution? Its prevention is impossible in present day conditions. It is worse than folly to attempt to close restricted districts. The inmates will simply take up their quarters in other portions of the town, making all decent women subject to the doubts of passing men. It is not our intention to go into any discussion of the ways and means of controlling houses of prostitution. The cure must begin in the home. As men increase in self-respecting purity, prostitution will decrease and it will decrease only as manly purity increases.

Sexual morality means a disappearance of the most horrible sins and loathsome diseases that afflict the human beings; it means a harmonious social system—a Utopia where all women are chaste, and all men are pure; it means a higher physical, intellectual, and spiritual development of the individual and the race.

CHAPTER XXV.

THE IDEAL WIFE.

Fitness for marriage in a young woman depends upon certain qualifications. It is the mother's duty to insist upon their acquirement before she consents to the daughter's entrance into wifehood. The ideal, in this case at least, is not an impossibility,—any girl with persistence and earnestness can attain to her level. Whether or not a woman is beautiful is of little consequence. Indeed, a handsome woman often makes a poor helpmate—too much admiration and attention are apt to render the recipient vain and frivolous. Beauty may excuse a woman's deficiencies for a time, but the day will come when other qualities will be more desirable in her husband's eyes.

Be a Good Housekeeper.—A woman, even if she has under her a corps of trained servants, should be competent to manage a home. The details of housekeeping come easily to the young wife who has been her mother's assistant. The way to a man's heart may not be through his stomach, but the sense of well-being arising from a good meal nicely served is conducive to happiness.

Be Good Natured.—A cheerful disposition is among the most desirable qualities in a wife. The details of housekeeping tire a woman and the weightier details of business have a like effect upon a man. The tact which

exerts a soothing influence upon the careworn husband is an invaluable trait in the wife.

Be Interested in Your Husband's Business.—A wife should take an interest in her husband's business, study its nature, and be able to discuss it from every standpoint. Sympathy and cheerful aid in the gloomy days cannot be overestimated.

Be Economical.—No matter how large or small a man's fortune may be a woman should know her husband's financial condition—otherwise she may be a burden rather than a helpmate. She should learn to buy household supplies at the best figure and to purchase her personal effects at bargain prices. The wife of a poor man who can do her own sewing and trim her own hats has a great advantage over the one in like circumstances who can do neither.

Do Not Be Jealous.—Many an unhappy hour would be eliminated were jealousy to be conquered. A wife who nags at her husband and refuses to trust him in the presence of other women is not to be pitied if she loses his affection. Nothing will drive him away more quickly than an accusation when he is not guilty.

Keep Well-Dressed.—Costly apparel is not necessary to good appearance. Neatness and cleanliness make any woman attractive. Some wives think it unnecessary to be

well groomed in the presence of their husbands. At least keep your hair tidy and beware of soiled collars.

Have Some Accomplishments.—Music in some form adds greatly to the home life. Many have no talent along this line, but every woman can study the art of entertaining. She should develop the talents she possesses. Some are good readers, others good conversationalists. None are so uncultured today that they cannot make a home more cheerful by their presence.

Be a Sweetheart and Lover.—After marriage never lose sight of the fact that you are your husband's sweetheart and lover in the truest sense of the word. Pay him little attentions. The marriage ceremony gives you that privilege and it is one of the chief means by which you hold your husband's love and affection. It remains with you to do well your part. Remember, that men are only boys grown up and the wife must take a mother's place.

CHAPTER XXXI.

CHOOSING A COMPANION.

In her choice of a husband a woman faces the most serious problem of her life. Upon her decision rests the happiness of herself and unborn generations. Failures in marriage are due largely to the thoughtlessness with which men and women enter into the matrimonial state—guided, too frequently, only by appearances and external graces. A girl, ofttimes, devotes more serious consideration to the design of a new party frock than to the selection of a life companion. Divorce would be less prevalent were the fact remembered that although lover and sweetheart are blind to each other's faults, the husband and wife are gifted with extraordinarily clear vision.

No woman should enter into a matrimonial contract without a thorough knowledge of the man's financial conditions. It behooves a woman to study her wooer's methods of making and investing money, his manner of spending his leisure hours, his business associates and his chosen companions. Not that it is well to marry for money or social position; they soon lose their attraction for a wife who does not love her husband. It is not necessary that a man accumulate a large amount of capital before he marries, but he should have the ability to support a family and to leave it provided for in case of his death. Few

men under thirty and often nearer forty are mature enough to master the many problems of life. A woman risks much in connecting herself with the experimental stage of a man's life.

From the beginning of time men have asked much of women and given little in return. He demands that she be pure and virtuous. She takes him, moral or immoral, without question. Few men there are, who have not gone the pace and sown their wild oats. She is fortunate who can find among her suitors one who is as chaste as he would have her be.

He who indulges freely in "wine, cards and women" does not make the ideal husband for any girl who has properly prepared herself to accept the position of wife and mother. He has cultivated habits which destroy him financially, physically, and mentally.

Women often remark that they prefer a man who has sown "his wild oats" and their actions carry out this sentiment. They believe that a "reformed rake" will settle down and make a better husband than one of a higher and nobler character. It can all be traced back to the double standard which demands license for men and restriction for women. The unchangeable law of God is forgotten, "What ye sow ye shall reap." The crop never fails. Neither remorse nor repentance will lessen its abundance. It is harvested by the guilty and the inno-

cent. "The sins of the father are visited upon the heads of his children even unto the third and fourth generations.

Do you love a man who has received his degree in the college of drunkenness, gambling, and vice? Are you desirous of reforming him? Look into the lives of innocent women and children, helpless reapers of the harvest of sin and shame and death.

In a hospital lies a tiny girl, a sufferer from inherited syphilis; a wife preparing to undergo a serious operation made necessary by gonorrhoeal infection; a youth influenced by evil companions, whose body is a living mass of corruption; a beautiful young mother whose blind babe is a product of her husband's sowing of wild oats.

In an insane asylum raves a maniac woman who married a charming, but dissolute lover of her sex to reform him.

In a fireless home a mother rocks her babe. Two children of three and four beg piteously for bread. The husband and father reaps his crop in the city jail where he is confined for drunkenness and petty theft.

A group of girls in their teens nursing their fatherless babes in a home for fallen women. "The common folly of men," you say. Yes a common folly, and the more detestable because of its commonness. Would you be-

come the wife of one whose innocent but illegitimate offspring daily curses his father.

Pictures of untold horror and unlimited suffering are they not? Do you desire a similar fate? Take your life into your own hands. Marry a man to reform him if you wish, but do not expect to escape the penalty. The laws of nature are inexorable.

CHAPTER XXXII.

HUSBAND AND WIFE.

This is so broad a subject and one upon which so much must needs be said that I almost stand aghast at the responsibility. Earth does not hold a more sacred tie nor an obligation so fraught with beauty and genuine pleasure—indeed we may safely call this relation the one thing worth while. When the compact is thoughtfully entered into it uplifts and elevates to such an extent that the humdrum things of life lose their sordid aspect and become beautiful. Every husband and wife has a personal obligation toward the world at large and it is their duty to make their marriage a perfect one so that their home may radiate happiness on every side and make others long for such an existence rather than dread it. Remove the integrity of the family and the salt of the earth is gone.

A man and woman drawn together by the indissoluble ties of love, planning and working together, mutually helpful, mutually forbearing and sharing fully each other's confidence, represent the home that has given to American domestic life its high position. Such a couple can contemplate old age with serenity and their life present the fittest earthly type of Heaven.

In the first place let us consider the husband's duty.

If a man can be made to realize a woman's true worth we have accomplished much. Married life is an enterprise where the wife is made a partner and co-worker. The Lord has endowed woman with natural faculties which, if permitted, will make her of untold value as an able assistant.

There is something within that rebels when a true woman finds herself being catalogued as a mere ornament incapable of sharing the problems that confront her husband. Such a woman glories in knowing that her womanhood is fully understood and she will not rest until she stands, in the eyes of society, upon the level ground of moral equality with the man she loves. She realizes that a childish dependence and an untrained and frivolous mind are unfavorable to the advancement of wifehood and motherhood and therefore to the progress of the world.

Marriage makes or mars a woman's life and in placing her entire happiness in the hands of her husband she is bestowing a sacred charge and he should look upon it as such.

Marital unhappiness can be frequently traced to money matters. A wife shows no interest in her husband's business, he is too reserved to acquaint her with his affairs. Too often a man looks upon his helpmate as a cook, nurse, housekeeper, and common drudge who needs no pecuniary recompense.

A wife should never be left in the dark as to her husband's financial condition. It does not require an undue amount of moral courage to say "I cannot afford it" and if the wife is made to feel that her responsibility is as great as her husband's she will say it willingly and cheerfully. A man never pays his wife a greater compliment than when he turns his bank account over to her and says, "This is our nest egg; you know what we can afford as well if not better than I. Use your own discretion, dear,—I know that it is in good hands and that you will use it wisely and well." We believe that is the proper way to settle the pin-money question. But instead of this harmonious condition of affairs, the following is often the case: The wife is looked upon as a respectable beggar and when she expresses a desire for a new dress or hat the husband remarks, "Can't you get along with the old one? You spend so much money for clothes. Mine cost a great deal less." The chances are that the wife's hat has been trimmed time and again and she is well worth many times the price of a new one. The wife keeps the house in order, trains the children, and makes home pleasant for the husband. What does he give her for it? A place she is supposed to call home. Well, when he married her he promised to endow her with all his worldly goods. It seems to us that meant share and share alike, and unless the husband takes the same

view and acts accordingly his wife will soon feel as though she is considered nothing more than a mere machine. He might as well say in so many words, "Of course I enjoy your company, but you must realize that I can't afford to pay you for doing your work. Don't forget that I earn the money that buys all the comforts of our home while you merely do away with the cost of keeping a servant," for his attitude implies as much. This causes the wife to wonder and say to herself, "Is this married life? Is this the treatment I deserve?" Perhaps the wife asks for ten dollars which she had planned to spend on the children and household necessities. How will she feel if she is met with a remark like the following? "Do you think I am made of money? I wish you would keep an account of the money you spend." Such remarks lay the foundation for much unhappiness. Don't let finance be the one bitter drop in the cup that otherwise would be full of happiness. Talk over the home expense account as you would any other. If the grocery or meat bill seems large there must be some reason for it. Perhaps the husband invited several friends in to dinner during the month, and is himself responsible for the increased expense. As a usual thing the husband is always too ready to assume, with an air that is not becoming, that he is the money maker and his wife the money spender. At the first breath of criticism the aver-

age woman is hurt and humiliated in a way that she can never forget. Therefore the husband should strive to learn the hard lesson of admiring rather than criticising.

If the tragedy of a woman's life be told, it resolves itself into the fact that they must be told constantly, repeatedly that they are loved. No woman can be reconciled into taking it for granted. They want all the little love phrases and tender attentions of their honeymoon and not one woman in ten thousand gets them, and yet with what persistency they keep on wanting. So while the ups and downs of life come and go don't neglect the courtesies and delicate attentions toward each other. "I love you dear" is just as sweet to the wife of five or fifty years as it was in the days of your courtship. As birds were made to fly and rivers to flow, so women were made to be loved and admired. We realize the joy of life just in so far as we strive to make joy possible to others. Show your wife that you are still her sweetheart and you will find her making use of all the graces that first won your love. Don't permit her to ever see you showing attentions and courtesies to her lady friends that you have outgrown or forgotten in her presence.

The true relations between husband and wife can only exist when there is a real, honest, healthy, passionate love with the desire for exclusive union with the object of devotion. Without this their union is a failure and we

ask you this question "Should the life-long bondage punish two unfortunate individuals where ignorance is the only crime they have committed?" How helpless is the husband or wife who does not know what it means to charm and satisfy simply from a physical point of view.

There is a strong obligation on the part of every young man to marry, and this is all well and good, but his obligation does not end there; in truth it is but the beginning of the end.

A single standard of morals for men and women is the only reasonable foundation upon which to stand, and yet in this day and age the pitiful truth must be faced that but few men are absolutely true to their marriage vows. The obligation he assumes at club or lodge no power on earth could make him faithless to and yet how many times more sacred is the promise made at the marriage altar, before his Maker, to the woman who is trusting her whole life's happiness in his keeping. He takes the same vow that she does, but it loses weight with the average man while the woman goes on blindly trusting to the bitter end. Early training has a great deal to do with this state of affairs; a girl from her infancy is taught suppression of emotions and self control, while the boy gives vent to every impulse, compromising with his conscience by saying, "All the other fellows do, and I'm going to be a good fellow." We can safely say this—more heartaches

and sorrow and wrecked homes are brought about in this way than from any other source.

"As unto the bow the cord is
So unto man is woman.
Though she bends him she obeys him,
Though she draws him, she follows,—
Useless each without the other."

To the wife, if we could give but one counsel, we would say, "keep sweet." If you want an ideal home this rule holds good. Enough things happen to married persons to embitter and sour them both, God knows, but can't you keep sweet through it all? Don't lose sight of the fact that you are the one bright spot in your husband's life, that since he kissed you goodbye this morning he has had nothing but plain hard facts to deal with, that the business world is no bed of roses and that he comes home to you at night tired mentally and physically and he's only a boy grown larger and needs a little petting and humoring for a while.

Don't meet him at the door with all the petty worries that have confronted you during the day. Lay them aside with your kitchen dress and just "be sweet." No matter how busy the day or how manifold the duties take the time to make yourself attractive before he comes home. See that the home looks inviting and yourself

equally so and he will forget all that has annoyed and worried him during the day. Make your husband an honored guest in the home. Don't save all the clean tablecloths and cut glass for the indifferent chance visitor and think that most anything will do for your husband. Let him see for himself that there is no one for whom you would take the pains you love to take for him.

No one admires a good mother more than a man, but don't let your husband feel that in being an ideal mother you are failing in the least little way as the ideal wife. He is handling the big problems of life and can't show quite the same amount of enthusiasm over little Johnnie's first tooth that you do, but don't shut him out completely because of this and don't lose sight of the fact that you were his wife before you were the baby's mother.

Love and religion go hand in hand. No home, especially if there be children in it, is perfect without a proper amount of respect due to religion. Early home training goes a long way in the formation of character and a child who is taught to lisp his little prayer at night is much better fortified to cope with the vicissitudes of life than one who has never been taught anything of the sort.

A cold and indifferent attitude of husband and wife toward each other is the worst possible discipline for a child. Home life ought to be full of kind deeds and demonstrations of love. Let love's light shine. Seek every

medium for its disclosure. Let the children feel that a sacred love permeates the home and you are giving them the right conception of home life. We would almost as lief see children brought up without the ten commandments as without love in the home.

So many women wonder why their husbands prefer the club to the home. You who may be pondering over this problem let me ask this question. Have you done everything in your power to make both the home and yourself attractive? This is hard sometimes, especially when there is no maid in the kitchen and the demands upon your time have seemed numberless, but it doesn't take long to slip into a fresh dress and see that your hair is becomingly arranged. We believe it is every woman's duty to make herself at all times as pretty and attractive as possible. It is a sad state of affairs indeed when a wife ceases to strive for her husband's admiration.

Wonderful fascination is in the little home for two. It may be a wee bit of a cottage with a garden at the back and roses climbing to the eaves. It may be a tiny flat in a city far up toward the roof, but if love exists, what matters the rest if it is crowned and blessed by the presence of a loving wife. The husband's cup of happiness is indeed overflowing. A cheerful, loving welcome, a good dinner seasoned with pleasant chat, a cigar of a favorite brand, and who shall call the master of the house irritable or infer that such a union is not a happy one.

CHAPTER XXXIII.

LOVER AND SWEETHEART.

The period of the betrothal is the maytime of life—a promise of radiant fulfillment not unalloyed joy, to be sure—"the course of true love never did run smooth." Even the sunniest May has its storms, though they be as zephyrs unto the storms of later seasons. The lovers' quarrels amount to nothing to the more sober eyes of maturity.

Too often are the lover and his sweetheart oblivious of the outer world. A certain amount of separation from the more prosaic inmates of their circle is not to be condemned, but utter forgetfulness of others becomes mere selfishness. A man has no right to monopolize a girl's time to the exclusion of all her other interests. Duty to relations and friends is not less binding because a more dearly loved person has appeared upon the scene. While she is an inmate of her father's house, a girl's first duty is to her parents.

A lover's respect for his sweetheart is measured by her reserve towards him. "The slip 'twixt the cup and the lip" may mean a broken engagement. The kisses lavished upon her bethrothed become a source of poignant regret if, for any reason, their lovers' vows do not end at the marriage altar. The familiarity of the present day is

in sad contrast to the respectful reserve of former days. Human affairs are too uncertain to admit of any risk in the matter. The freshness and sweetness of a girl are lost by overindulgence in caresses.

During the period of courtship the lover should be freely invited to the beloved's home. It is fitting not only that he become acquainted with her, but that her parents be given an opportunity to become acquainted with him. No engagement should be sanctioned until a thorough knowledge of the suitor is obtained. If he is tactfully treated he will be led to reveal himself much more plainly to the father than to the dazzled eyes of the maid. The frequent presence of the girl's parents does much to prevent the hypocrisy practiced towards each other. The ever present desire to please causes the lovers to hide their real selves from each other. The faults are deeply hidden under an outward layer of winning sweetness.

That there is such a thing as "love at first sight" cannot be denied. That it is often the truest love cannot be questioned. As we are often instinctively drawn to or repelled by persons at a first meeting, it is not to be wondered at that a man and woman immediately see in each other the realization of an ideal. Further companionship may increase or decrease such quickly aroused feelings. The test of love lies in time.

If the attraction between the lovers is infatuation, it

will reveal itself in the cold reality of marriage. A girl's lovability as a sweetheart may not be a sure indication of her fitness as a wife. It is for this reason that love affairs that find their beginning in a friendship prove a source of great happiness. The slow growth of such love gives each person concerned sufficient opportunity to discern faults and virtues. Each has a tangible reason for his feelings. "Love at first sight" is a product of the emotions; love based upon friendship, of the intellect. It is true that the feelings are often the best guide, but it is just as true that in most cases, the intellect is the safest one.

In some cases a long engagement seems the only possible course. However, if circumstances so arise that marriage cannot take place for a number of years it is better if the persons do not bind themselves. On the other hand, a hasty marriage is greatly to be condemned. A three months engagement may not be too short if the previous acquaintance was long. In the majority of cases a betrothal of a year is advisable. No hard and fast rule can be laid down. The time should be just as long as it takes to satisfy the parents and lovers that the union will be productive of true happiness.

CHAPTER XXIV.

HOW TO BE BEAUTIFUL.

The triteness of the saying, "Beauty depends upon health" does not lessen its truth. The invalidism once so much admired under the name of "delicacy" is now a thing of the past. To be sure, the fragile beauty has been replaced by the tensely nervous devotees of society, or by the overworked business woman or housewife—a fact to be less deplored because a realization of the uselessness of her condition has come to womankind and a change in the right direction is inevitable. Worry, discontent, and fretfulness tend to lower the general vitality, producing sluggish circulation, indigestion, and a torpid liver, to which many blemishes upon beauty can be traced. Until our homes are simpler and less an object of care and anxiety, until dress is determined by beauty, health and utility rather than fashion's caprice, until our tables are ordered with regard to physical well-being, there will be various forms of nervous diseases and lack of self poise.

A woman should regard the violation of the laws of health as equally sinful with transgression of moral laws. True beauty can be obtained only by the most careful obedience to nature's rules upon exercise, fresh air, diet,

clothing, baths and sleep. For a discussion of these we refer to preceding chapters.

To be well groomed is another requirement to good looks. However, a woman who is well physically usually has enough self respect to pay attention to the minor details which count for so much in preserving a good appearance.

CARE OF THE FACE.

The condition of the face is dependent upon that of the whole body. Improper diet, lack of exercise, uncleanliness, any internal disorder, lack of sleep, or worry promptly affect the complexion and the expression of the face. Exposure to heat or cold is injurious to delicate skins. Any roughness due to exposure may be given certain relief by the following wash:

White brandy .....2 parts
Rose-water .....1 part

This lotion is far more valuable than a patent preparation, and should be used night and morning. A woman at least knows what she is getting. Prepared patent lotions are often put up by quacks and pretenders and when they are not absolutely useless, may be positively injurious. Ulcers have often been produced by them.

To Remove Pimples.—Some pimples require a doctor's prescription. The small red common pimple may be cured by applying the following lotion twice a day:

Sulphur water	1 ounce
Accetated liquor of ammonia	¼ ounce
Liquor of potassa	1 ounce
White wine vinegar	2 ounces
Distilled water	2 ounces

These pimples are caused by obstruction of the skin and imperfect circulation, so friction with a coarse towel and exercise to promote the flow of blood are most beneficial.

To Remove Blackheads.—Blackheads, often called fleshworms, are caused by a clogging of the sebaceous glands. They may be pressed out with an extractor made for the purpose. The pores should first be enlarged by steaming or by hot applications so that consequent redness and swelling may not be so severe. An astringent, alcohol or some similar lotion, will contract the pores. The blackheads should be extracted at night so the redness may have a chance to disappear. They are often the consequence of indigestion, and the diet may have to be corrected before any permanent cure is effected. Severe friction and the application of the following lotion are very efficacious:

Liquor of potassa .....1 ounce
Cologne .....2 ounces
White brandy .....4 ounces

To Remove Freckles.—A very good lotion for freckles is that used by the celebrated Madame de Maintenon.

Venice soap .....1 ounce
Lemon juice .....½ ounce
Oil of bitter almonds.....¼ ounce
Deliquidated oil of tartar.....¼ ounce
Oil of rhodium ..... 3 drops

Dissolve the soap in the lemon juice; add the oils; place the whole in the sun till it acquires the consistency of ointment; add the oil of rhodium. Anoint the face at night, washing off in the morning with pure water, or with a mixture of elder-flower and rose-water.

To Remove Tan.—An excellent lotion for tan is made of

New milk .....½ pint
Lemon juice .....¼ ounce
White brandy .....½ ounce

Boil the whole, skim it clear from all scum and use night and morning.

To Remove Yellow Spots.—To cure yellow spots due to liver or stomach trouble medicinal treatment is neces-

sary. A useful wash to be applied three or four times a day is

Strong sulphur water .....1 ounce
Lemon juice .....¼ ounce
Cinnamon water .....1 dram

To Remove and Prevent Wrinkles.—The best preventive of wrinkles is a reposeful, self-controlled life. Indulgence in worry, anger, envy, or discontent soon sets its seal upon the countenance. Late hours or dissipation of any sort are an inducement to wrinkles. Massage with some good cold cream may prove valuable. The rubbing must be across the lines. Frequent ablutions and rubbing with a dry napkin are of use in the prevention of premature lines.

To Remove Superfluous Hair.—The only sure way of removing superfluous hair is by electrolysis. Any preparation of drugs acts as does the razor—it removes temporarily and a heavier growth appears. Many preparations cause ulcers to appear.

Care of the Mouth and Lips.—The beauty of the mouth depends primarily upon its expression. Its coloring may be improved by the use of tincture of benzoin, but it will be only harmed by the use of paint. Nothing is farther from loveliness than artificiality and nothing is

more artificial than paint, or, it may be added, more easily detected.

To be sure of a sweet and clean looking mouth one must pay close attention to the cleanliness of the teeth. The brush is not the only necessary implement. A very valuable acquisition to the toilet table is a spool of tooth silk. A brush with irregular bristles on is the best. The teeth should be brushed up and down to every side, and the silk thread pushed up between them to remove any particles of food.

There are a number of good tooth powders, pastes, and washes upon the market, as well as some very undesirable ones. A powder should not be gritty or rough. Pumice stone should be used sparingly about once a month to remove any accumulation of tartar. Equal parts of hydrogen and listerine make a pleasing mouth-wash and one that will destroy the infecting power of germs.

Above all do not neglect decaying teeth. Nothing is more detrimental to digestion. A visit to the dentist at an early period may save doctor's bills as well. Decaying substances give rise to fetid breath. Apreparation which will remove this odor is diluted listerine. It is best to buy listerine prepared by some manufacturing chemist, as it is often impossible for a druggist to prepare it properly. If you are going to wash the teeth but once

a day by all means do it at night. The acids in the mouth are much more active during sleep than in the daytime.

Care of the Ears.—A good preparation for removing wax from the ear is hydrogen peroxide diluted with water. Remove the wax by syringing. Never put any metal substance in the ear to remove it. Instead, put in a few drops of warm olive oil at night and stop with a little cotton to prevent it flowing out. Be careful to remove the cotton.

Care of the Eyes.—To preserve the brilliancy of the eyes never overstrain them. Do not read when lying down, in moving cars, or when the eyes are tired. Sties and inflamed lids may be relieved by bathing the eyes frequently with two parts hot water to one part of boric lotion. Absorbent cotton dipped into the solution may be packed on the eyes at night. Oiled silk will keep in the heat. If the lids stick together in the morning smear an ointment over them. To stimulate the growth of the eyebrows rub in a little warm oil or ointment.

Care of the Nose.—A red nose is frequently caused by indigestion or some trouble inside it. It should be bathed every night in very hot water. Powder does harm by causing inflammation. The nose may be washed out by means of a douche, but never should be syringed out because the fluid may cause deafness by running into the ears.

CARE OF THE HAIR.

Constant brushing is the secret of fine glossy hair. An easy method of cleansing brushes is to dip them in a bowl of water containing a small portion of ammonia. This immediately removes any grease and stiffens the bristles as well. Rinse in two or three clear waters. The comb should be coarse toothed and of smooth black rubber. Never use a fine comb. Its use will injure the hair and do little good.

Lotions are seldom efficacious in the prevention of baldness and discoloration of the hair. A massage of the head is valuable at infrequent periods, but should not be carried to excess. Indeed, Mrs. James Brown Potter ascribes the fact that men are more frequently bald than women to the fact that they indulge in much more frequent treatments. Simple cleanliness, frequent brushing, and occasional massage are the only necessary measures. However, if one desires a lotion, the following has been proven good:

Cologne	8 ounces
Tincture of Cantharides	1 ounce
Oil of Lavender	½ dram
Oil of Rosemary	½ dram

The hair should be washed not oftener than once in four weeks. If it becomes too oily without a more fre-

quent shampoo, powdered orris root will be found an excellent cleanser, and one which imparts a delightful odor to the hair as well. It may be rubbed in the scalp and brushed out carefully. It is best to use castile soap when washing the hair. A good shampoo consists of raw eggs rubbed into the scalp.

The use of hair dyes is much to be deplored for they are usually so evident. A simple, harmless lotion to restore color to grey hair is made of equal amounts of powdered walnuts and alum which should be allowed to stand for forty-eight hours, then be heated in a moderately hot oven with a pint of olive, cottonseed or other oil, till no more steam comes off. Then press out the pulp and put the liquid into jars for use.

CARE OF THE HANDS.

A well groomed hand is certainly a thing of beauty whether it be large or small. True, it takes a little time which a tired woman often begrudges, but the result of slight attention is extremely satisfying. Each night the hands should be scrubbed with a hand-brush—take care to brush the cuticle toward the wrist. Thoroughly dry them and there will be no danger of chapping. Rub any good cold cream into the base of the nails to soften the cuticle which should be pushed back from the nails but

never cut. The nails should be trimmed to correspond to the outline of the fingers. Do not cut them too close. A chopped-off appearance is certainly unbecoming. If the nails are polished oftener than once a week they will become brittle. Rubbing them upon the palms of the hands after washing will restore their brilliancy. If a woman wishes to keep her hands soft and white she may find it necessary to wear rubber gloves during her work. A good lotion to apply at night is

Glycerine	2 ounces
Rosewater	1 dram
Alcohol	4 drams
Tincture of Benzoin	20 drops

or

Spermaceti (melted)	1 dram
Almond oil	1 ounce
Powdered camphor	1 dram
Lanolin	¼ ounce

CHAPTER XXXV.

GOLDEN RULES.

"Don't make any affectionate demonstrations in public places. How ridiculous for women to meet on the street and fondly embrace each other."

"Remember, perfect health is better than gold,—therefore, don't abuse nature."

"Beauty and bad breath can not go together no matter how a woman may try to make them."

"Women should keep young in both spirit and appearance."

"Every woman has three inalienable rights: life, liberty, and the pursuit of a husband."

"Be natural and you will never be ridiculous."

"It is not always the most active woman to whom men owe the most. There are women who by their very serenity, their calm strength of character, instill into man the deepest courage."

"The most charming women are not beautiful, but beautiful women charm when they forget their beauty."

"Let all wives beware of pulling too hard upon the matrimonial yoke; it looks stronger than it is."

"Every time a wife makes a scene through jealousy she tightens the chain of any rival who may exist."

"It is not always beauty, position or youth that elect women social queens. There is a gift better than either,—tact."

"Modesty is the unmatchable jewel of woman."

"A woman need not consider herself so marvelously clever who wins a man; any woman may do that; she only is clever who can keep him."

"Some of the most beautiful love stories are lived far from the roar of cities, where love means love and doubt seems infamy."

"Woman may combine every grace of mind and body, yet lacking in gift of expression, she need never hope to become popular."

"Man loves where he must; women must love—somewhere."

"Woman's greatest fault.—? ? ? ? ? ? ? ? ? ? "

"What a woman wants and what she needs are constantly warring with what she can afford."

"Woman has put more spokes in the wheel of destiny than the Gods contemplated."

"There can be no friendship without truth, but there can be a deal of truth without one grain of friendship."

"Politeness is a gilt edged instrument that seldom fails to be rewarded."

"To marry and rear children, to become useful citizens is a 'vocation' even a clever woman might consider worth her while."

"Women of very high intellectual attainments are swayed by strongest passions, though few will admit it."

" 'Where shall I find happiness?' asked a timid soul. 'Next door to content,' replied one who knew."

"Until wives consider it worth while to be as interesting as sweethearts husbands will not consider home as attractive as the club."

"When I learn that husband and wife never quarrel I know that indifference has set in and after that—the deluge."

"A beautiful woman delights the eye; a wise woman, the understanding; a pure woman the soul."

"After marriage is the time for a woman to give especial attention to her appearance."

"How wonderful is that woman who continues to be her husband's sweetheart through life."

"The only sort of love untinged by doubt is love of a good mother."

"To control a man a woman must first control herself."

"When the final record shall be made clear I think we shall be greatly amazed to see how alike in their frailties were men and women."

"'Tis well to remember that the highest culture is to speak no ill."

PART II

Devoted to the Symptoms and Treatment of
Diseases of Women and Children
including care of the Baby

In the prepartion of PART II, as in other portions of the book, my wife's assistance has been invaluable, and as a token of love and appreciation of her constant and untiring efforts, I wish to mention that much of the credit is due her.

"What a piece of work is woman! How noble in reason! How infinite in faculty! In action how like an angel! In apprehension how like a God! The beauty of the world."

SIGNS AND SYMPTOMS OF PREGNANCY.

Generally speaking, it is not difficult to ascertain whether or not a woman is pregnant. She is usually aware of her true condition before she consults a physician. However, in a few cases it is impossible to state with absolute certainty that she is pregnant.

It is often important to learn if a woman is pregnant after she misses her first menstruation; but unfortunately it is just at this period that the diagnosis is most difficult as the positive signs are not present at this time.

There are certain signs and symptoms which give evidence of pregnancy, and we will mention those which can be noted and considered by the patient herself.

1. **Menstruation Stops.**—This is very significant, especially in women who have been regular, and from this fact alone the maojrity of married women do not hesitate to diagnose their own cases. In women who do not menstruate regularly, this symptom is not so valuable, as certain diseases will cause menstruation to stop for several months and during this time conception may occur. In a few cases menstruation may occur once after a woman becomes pregnant. If this does occur, the flow is generally less than at other times. Very rarely does

the menstrual flow appear more than once after pregnancy has taken place. If it does, the indications are that there is some diseased condition present.

2. **Changes in the Breasts.**—Pregnancy causes a marked change in the breasts. During the first few weeks there is a sense of tenderness and a pricking sensation. After the second month the glands begin to enlarge and one can often notice small blue veins just under the skin. The skin around the nipple becomes darker in color and the colored ring around the nipple enlarges. In blonds it acquires a pinkish cast while in brunettes it is a very dark brown. There are also little glands in this colored ring which enlarge and form little nodules. The nipple increases in size, become darker, and stands out more. During the first few months a thin yellowish fluid may be made to ooze from them by gentle massage. These changes are more characteristic in the first pregnancy.

3. **Nausea and Vomiting or Morning Sickness.**—There occurs in the pregnant woman more or less disturbance of the digestive organs, especially affecting the stomach. This causes a sick feeling which usually occurs early in the morning and passes off after a few hours. In some cases it lasts all day and causes a great deal of annoyance, causing a condition known as uncontrolled vomiting in pregnancy. This sickness usually makes its first appearance about the end of the first month and

lasts about eight weeks. It varies from a slight nausea to a severe and continuous vomiting. About two-thirds of all pregnant women suffer from this more or less.

4. **Quickening.**—This is the time during pregnancy when a woman feels life for the first time. It is a fluttering sensation in the abdomen and is caused by the movements of the child. This may be noticed as early as the tenth week, but usually occurs between the fourth and fifth month. Some women cannot tell when they first feel life, so this symptom, like the others, cannot always be relied upon.

5. **Changes Which Occur in the Vulva and Vagina.**—The mucous membrane of the vulva and the opening into the vagina have a congested appearance during pregnancy and the color is of a dark blue or purple hue. It is of value when associated with other symptoms.

6. **Bladder Irritation.**—When pregnancy occurs the uterus enlarges and tips slightly forward, thus resting upon the bladder and causing a frequent desire to urinate. This is most frequently noticed at the beginning of pregnancy and passes off as the uterus ascends into the abdominal cavity, but recurs again when the head of the child descends into the pelvis a few weeks before confinement.

7. **Cravings.**—A pregnant woman generally has a peculiar desire for various kinds of food, some craving

one article of diet, while others crave things entirely different. There is also a mental change in women at this time. It is varied and no two are affected in the same manner.

INSTRUCTIONS FOR THE PREGNANT WOMAN.

Pregnancy being a normal condition should not make any serious change in the general health. Yet, oftentimes complications arise and it is necessary to keep such a patient under close observation during the early months of pregnancy. A woman should engage her physician that he may keep her case under observation and give her the necessary advice in regard to her mode of life during pregnancy. It is not necessary for a woman to change her general mode of living to any great extent and the one main object in view is to keep her general health at its very best. Her physician should be a person in whom she has complete confidence as to his ability to handle her case successfully and she should take advice from him; should consult him in regard to her case and should not take advice from her lady friends; especially is this true of a woman during her first pregnancy.

The fact that she is in the hands of a competent and careful physician will contribute largely to her peace of mind as well as to her general health.

Exercise.—During pregnancy a woman should be encouraged to live out of doors as much as possible; it is difficult to say just the amount of exercise she should take, but it should not tire her. Such exercise should

consist of walking, driving and a certain amount of riding and automobiling, especially if it is an easy car; this is advisable in the early months of pregnancy, but not so much in the latter part. When a patient cannot take the proper amount of outdoor exercise she should take a certain amount of massage in the hands of a competent operator which will be found of much value. She should take frequent salt rubs and keep her skin in the very best condition possible by occasional hot baths in the evening and cold sponges followed by vigorous rubbing in the morning.

Diet.—The patient should follow her ordinary routine of diet to which she is accustomed but she should refrain from too highly seasoned foods which are hard to digest. The healthy child is developed by the mother keeping her digestive system in the very best condition possible and she should have an abundance of good food.

Habits.—The habits of a pregnant woman should be that of the very best during her pregnancy. Her associations should be pleasant; she should not have any worry or anxiety of any nature. She should develop a taste for good reading and be surrounded with all the comforts that it is possible for her to secure. The uterus is oftentimes enlarged and interferes with the movements of the bowels and produces constipation. It is necessary for the bowels to move daily and it is best accomplished

by taking a teaspoonful of Kasagra three or four times a day. Active cathartics and pills should not be used. Any other cathartic should be prescribed by the attending physician. Moderate sexual intercourse during the first few months of pregnancy possibly does no harm, yet, it should be indulged in very sparingly and positively forbidden in the last months.

Clothing.—The clothing should be so arranged and worn that it will cause but very little, if any, pressure on the waist, especially in the latter months of pregnancy. It is best at this time to dispense with corsets and wear a loose-fitting corset waist. In some cases where the abdomen is very large and especially in women who have had a number of children it is well to wear an abdominal support. A Storm Abdominal Binder answers the purpose very well. When large veins occur in the limbs the leg should be bandaged or an elastic stocking worn. Sometimes these veins are located about the vulva and rupture during confinement.

The Urine.—The frequency that kidney trouble complicates labor makes it necessary that the urine should be carefully examined at regular intervals, at least once a month for the first seven months and the last two months on the first and fifteenth of each month. This is very important and will often prevent a most dangerous compli-

cation, and a patient who has symptoms such as scanty flow of urine, headaches, swelling of the feet or face or loss of blood no matter how slight, or constipation should immediately notify her physician. Six weeks before the date of confinement the expectant mother should purchase a confinement outfit and also what things are needed for the baby. This is fully considered under that heading. Her physician should be consulted about a month before the date of the expected confinement in order that he may make a thorough examination and note any abnormal condition which may be present.

WHEN A PREGNANT WOMAN SHOULD CONSULT A PHYSICIAN.

As soon as the symptoms of pregnancy develop, a woman should consult a physician and place her case under his care. During the period of pregnancy if there is a discharge from the vagina, swelling of the legs, constant vomiting, stomach trouble, varicose veins, rectal trouble, bearing-down sensation, constipation, diarrhoea, headache, especially when there is dimness of the sight, or when the nipples are abnormally formed, she should notify her physician at once.

SIGNS OF LABOR AND PREPARATION OF THE PATIENT.

Pain is the usual sign that labor is beginning. It is intermittant and of a bearing-down nature generally beginning in the back and descending to the lower part of the abdomen. It increases in frequency and occurs at regular intervals. Sometimes the first symptom is a sudden gush of water. Especially is this true in some cases of premature birth. In a case of this kind notify your physician before the pains begin. If the pains continue and the patient is satisfied that labor is in progress she should prepare her person. The bowels and bladder

should be perfectly empty. Take an enema consisting of a pint or two of warm soapy water and retain as long as possible to empty the lower bowel. This should be done if the bowels have recently moved as it is necessary to have the rectum empty. The hips and genitals should be thoroughly bathed with soap and water and then thoroughly washed with lysol solution. Do not take a douche unless ordered by the nurse or physician. If the hair on the genitals is very long it should be clipped so the parts may be rendered thoroughly antiseptic.

THE CONFINEMENT.

In preparing the room for a confinement select one that is upstairs and has a southern exposure. It is best to have it devoid of carpets and draperies, but if the room has a carpet it should be protected by several sheets of wrapping paper or paper of any kind. If possible, a couch should be provided for the nurse.

The patient should occupy an ordinary bed with a good solid mattress. If a bed is procured for the occasion, it is well to get a three-quarter bed. The nurse should have in readiness an abundance of linen, old linen being preferable. A rubber sheet should be placed on top of the mattress over which is placed the lower sheet and this should be covered by the draw sheet which

is made by folding a common sheet. The draw sheet and the rubber sheet should both be pinned to the mattress at each corner. This will prevent the sheets from slipping and will keep them smooth beneath the patient. Two hot water bottles should be in readiness.

THE NECESSARY ARTICLES.

Make a half dozen pads out of cheesecloth and absorbent cotton. They should be about thirty inches square and about two inches in thickness. These pads should be basted through the center and tied as the ordinary comfort is. Cut from cheesecloth three dozen pieces about six or eight inches square, fold, and pin around them a piece of old muslin. These together with the pads should be baked in an oven half an hour each day for two or three days prior to the confinement. They should not be opened until ready for use.

A rubber sheet one by two yards and six or eight sheets of large heavy brown wrapping paper should be at hand to place under the patient and on the floor.

One bed-pan.

One three-quart fountain syringe.

One bottle colored Corrosive Sublimate tablets.

One small bottle Chloroform.

Two papers each of large and small safetypins.

One eight-ounce package of absorbent cotton.

Two yards of unbleached cotton.

Three ounces saturated solution of Boracic acid.

Eight ounces pure olive oil.

One ounce Ergot.

One strand of braided silk.

Four ounces Lysol.

Two porcelain or granite pans or two ordinary wash bowls.

Two pitchers.

Five yards of sterile gauze.

White castile soap.

One medicine glass.

One teaspoon.

One can Squibb's Talcum Powder.

One quart of vinegar which has been boiled.

At least two gallons of boiled water. This should be prepared as soon as the confinement begins and should be boiled half an hour. It should be set aside to cool, but do not pour cold water into it. It would be well to have a small quanity of ice on hand as it may be necessary.

CARE OF THE MOTHER AFTER CONFINEMENT.

After the patient has been made comfortable by removing all soiled linen, the parts should be thoroughly cleansed with lysol solution (one teaspoonful to a quart

of water). Following this, a vulva pad made of cotton wrapped in sterile gauze is put in place. This should be held in position by a T bandage. The vulva pad should be changed often enough to keep the parts perfectly clean, as this is very essential.

The Binder.—This is a bandage which extends from the umbilicus down below the hips and is applied immediately after delivery. It is used as a support for the abdominal wall and possibly tends to reduce the patient's figure to its original condition. It is not believed that it has any influence in causing the uterus to contract and should be left on only a short time; however it should not be applied until after the uterus has contracted and all danger of hemorrhage is past.

Afterpains.—As a general rule afterpains do not give any serious trouble and they ofttimes assist in causing the uterus to contract. If any medicine is given it should be prescribed by the attending physician. These pains occur most frequently in first confinements when the uterus has been subject to great distention.

Rest.—As soon as the toilet of the patient has been completed and the binder applied the room should be darkened and she should be encouraged to sleep. All visitors should be excluded for the first few days and the patient should be kept as quiet as possible for about ten

days. However, she may be permitted to move freely and may be propped up during her meals. She should not lie upon her back as it has a tendency to cause backward displacement of the uterus. She should lie on her sides and change positions quite often.

Diet.—A good liberal diet is allowed after the bowels have moved and the patient should take plenty of good nourishing food. A good hot drink of any kind that she prefers should be given shortly after labor is over. During the first twenty-four hours the diet should be composed of tea, coffee, cocoa, milk and soft buttered toast. This is about all the patient will care for. On the second day soups, poached eggs, and raw oysters may be added. After that the diet may be increased each day with chicken, fish, baked potatoes, rice, etc., until the regular diet can be given.

Bowels.—A mild cathartic should be administered on the second day unless the bowels move of their own accord before that time. A dose of any of the following may be given: A half ounce of Rochelle's Salts in a small quantity of water; a half bottle of Citrate of Magnesia; or a half ounce of caster oil. After the bowels move the first time they should move regularly every day. If they do not move of their own accord, give a teaspoonful of Kasagra at bedtime. Some patients do well

on Phenolax, one tablet at bedtime, or one or two teaspoonfuls of Compound Licorice Powder. After each movement of the bowels and after urinating the parts should be irrigated and washed with pledgets of cotton soaked in lysol solution.

The Temperature.—The temperature should be carefully watched during the first few days to note if there is any infection taking place. The physician should be notified at once if there is any rise in temperature.

The Kidneys—The patient should urinate within six hours after delivery. When she is unable to do so she should be catheterized, but this should not be done until the bladder forms quite a tumor above the pelvic bone and when the patient feels a desire to urinate prop her up in a sitting position. This is better than resorting to catheterization as ofttimes when this is once done it must be continued for several days. However, if the patient must be catheterized, it should be done by the physician or a trained nurse.

Time to Rise from the Confinement Bed.—It is impossible to set any fixed date for allowing the patient to sit up. Most women figure that ten days is the proper time, but she should be kept in bed until the uterus is well contracted, and in normal cases it takes six weeks for the uterus to regain its normal size. Therefore, two

weeks in bed is not too long for the ordinary case. If there are complications or the patient is unusually weak, a much longer time should be spent in bed. The best method is for the patient to sit up an hour the first day, two hours the second day, and so on, increasing the time an hour each day until she is able to be up all the time. She should be kept in her room three weeks and during the fourth week may be allowed to move about, but should not go below stairs until this time. In some cases the duties of the housewife compel her to disregard some of these orders, but they are imperative if a woman expects to regain her health and keep it.

Before the patient is discharged the physician should make a final examination to ascertain if everything is all right and no treatments are required.

CARE OF THE NIPPLES AND BREASTS BEFORE AND AFTER CONFINEMENT.

The responsibility of caring for the nipples and breasts is borne in most cases by the mother or nurse. The attending physician expects her to keep them in a normal condition, thus preventing abscesses from forming; this is a very unfortunate complication which causes the patient much suffering and may result in artificial feeding. It is greatly to be deplored if a mother cannot nurse her infant and no effort should be spared to prevent such a misfortune. Therefore the breasts and nipples should be given special care and attention before and after confinement.

Care of Nipples Before Confinement.—During the latter months of pregnancy wash the nipples with soap

1—Normal. 2—Flat 3—Retracted.

Fig. 129

and water often enough to keep them free from any crusts. After washing them apply a small amount of sterile vaseline and cocoa butter equal parts. If the nipples are short and retracted, Fig. 129, 2 and 3, they

should be pulled upon daily with the fingers. This will elongate them and render them fit for nursing. The breast pump, Fig. 130, may be used for this purpose, but the suction should not be applied with too much force.

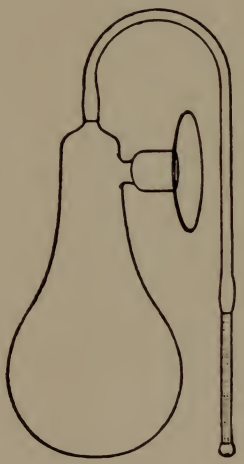


Fig. 130—Breast Pump used to develop the nipples.

To toughen the skin of the nipple wash it daily with a solution of alcohol and witchhazel, equal parts. In the case of blondes with very tender skin, paint the nipples three or four times a week with the tannate of glycerine. Any druggist will prepare this for you and it should be applied with a feather or camel's hair brush. Handle

the nipple gently at all times and if it is normal size it should not be massaged or pulled.

During pregnancy the clothing should be arranged so that there will be no pressure on the nipples, and if the breasts are large and heavy they should be supported with the elastic breast supporter.

Sore Nipples After Confinement.—This painful condition occurs more frequently in first confinements and in women whose nipples have been flattened by wearing tight clothing. Or it may be that they have not received proper treatment before confinement. In some cases the nipple is deformed. Fig. 131.

1—Polyoid. 2—Mulberry 3—Split

Fig. 131–

Excoriations of the Nipple.—This is a peeling off of the delicate skin which covers the nipple and it is caused by the friction of the baby's tongue and lips while nursing. It is the raw surface with small elevations (papillated) and is a strawberry color. The sore may be large enough to cover the entire nipple. It is very painful and often bleeds when the scabs are removed. To stop the irritation a nipple shield, Fig. 132, should be used.

This is the best form of shield. It should be taken apart after each nursing, thoroughly washed and kept in a tumbler of saturated solution of boracic acid. It should be thoroughly boiled once a day and should be washed with sterile water each time before it is used.

Babies decline at first to nurse the shield; but if hot applications are applied to the breast to assist the flow of milk and the shield is tightly applied to the breast and partly filled with milk pressed from the breast by the fingers, your efforts will almost always be crowned with success if you are persistent.

Fig. 132—The Acme nipple shield, to protect sore nipple when baby nurses.

After each nursing gently wash the nipple with a saturated solution of boracic acid. Dry well and apply the compound tincture of benzoin on the inflamed sur-

face with a camel's hair brush or feather. Apply two or three thin layers at each treatment, then apply an ointment composed of caster oil and Balsam of Peru, one dram each, and enough lanoline to make one ounce. Sterilize before using. Before baby nurses again wash the nipples with a saturated solution of boracic acid followed by sterile water. Also wash out the baby's mouth.

Fig. 133—Bandage properly applied for distended breasts.

Continue this treatment until the nipple is perfectly healed. If treated early it is usually relieved in from twenty-four to forty-eight hours. If for any reason the

shield cannot be used, apply the above treatment as directed, omitting the use of the shield, but if possible it should be used.

Fissures or Cracks on the Top of the Nipple.—These cracks or fissures are extremely painful and generally bleed during nursing. The treatment is about the same as for excoriations; that is, the shield is used and the

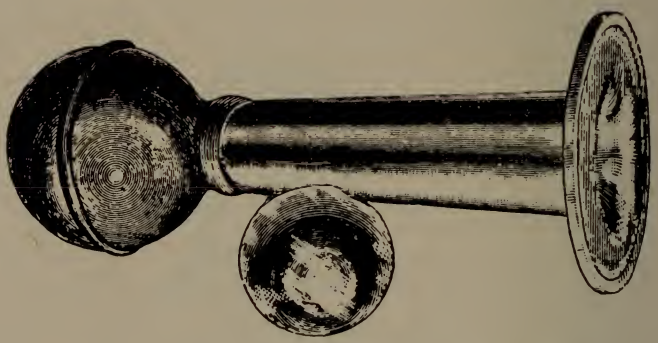


Fig. 134—This is the best form of a breast pump to use. Care must be used in its application not to injure the nipple or breast.

nipple is washed before and after nursing. The fissure should be gently washed with a two per cent. solution of nitrate of silver each night and morning. At all other times use the compound tincture of benzoin as directed in the treatment of excoriations. Fissures of this kind heal rapidly.

Fissures or Cracks at the Base of the Nipple.—These cracks are usually on the under side of the nipple where

it is joined to the breast. The treatment is about the same as for fissures on the top of the nipple. In addition to the other treatment apply an eight per cent. solution of nitrate of silver to the fissure. The best applicator is a little cotton wound on a toothpick. This treatment should be applied until the sore assumes a healthy appearance, then use only the tincture of benzoin compound as for excoriations. Put a small piece of sterile gauze or medicated cotton just under the nipple to keep it from touching the breast so that the surface of the fissures will not be irritated. Put castor oil and Balsam of Peru, equal parts, on the gauze or cotton so it will not adhere to the sore. The nipple shield will not relieve the pain in every case and can be used only when it does not fully open the crack. Cracks of this nature are very troublesome and slow to heal. Consult your physician if this treatment does not give relief.

DISEASES OF THE BREAST.

Distention of the Breast.—The most common disorders affecting the breasts are distention and engorgement. When they become so distended with milk that they are painful, feel hard, and lap over on the patient's sides they must be supported by a well fitting bandage, Fig. 133.

How to Apply the Bandage.—Take a piece of outing flannel fourteen inches wide and about a yard long and fold upon itself and place next to the skin on the back and sides. Have the patient or an assistant hold the breasts well up on the chest. The ends of the bandage should come within about one inch of the nipple when the breasts are well drawn up. If necessary, fold the ends under. Put a little cotton between the breasts if they touch and under the ends of the binder on the outside. Take another piece of outing flannel six inches wide and one yard long and fold and cut in the middle. Pin to the corners and ends of the wider band as illustrated. Insert two pins close to the edge of the chest binder. The double edge should be next to the nipples. Bring one slip above the breast and the other below, pin same on opposite sides and attach shoulder strap. This does not cause any pressure on the nipples and they are free for nursing without removing the binder. The binder and nursing the child are all that are required in most cases to reduce the distention which gradually disappears in a few hours.

Engorged Breasts.—When nursing and the binder does not relieve the distended condition and the breasts become harder, larger, heavier, and also knotty, very tense, hot and tender, we have the second degree of dis-

tention known as engorgement. For this condition use the bandage, breast pump, Fig. 134, and hot applications, Massage the breasts as directed.

HOW TO MASSAGE THE BREASTS.

Apply to the breasts a towel first wrung out of a hot Boracic acid solution and then hot sterile olive oil. This will render the skin quite slippery. Now massage with the finger tips as directed.

First Motion.—Begin with the finger tips well outside the edge of the breast and stroke gently and in such a way that the finger tips will terminate at the nipple, Fig. 135. Massage the whole surface in this way, paying special attention to any affected part.

Fig. 135—Showing First Motion for massaging the breast, using the upward stroke, finger tips open.

Second Motion.—This motion consists of spreading out both hands over the breast as evenly and smoothly as possible and pressing firmly against the chest, Fig. 136. As a rule this pressure is not painful. After this even pressure has been well practiced and all the glands covered use the third motion.

Fig. 136—Showing Second Motion for massaging the breasts, using both hands placed flat on the breasts.

Third Motion.—This is accomplished by placing the tip of the forefinger near the nipple and making gentle circular strokes from the nipple to the base of the breast, Fig. 137, supporting the breast meanwhile with the other hand. Massage the whole breast in this way, applying a little more pressure at the edge of the breast than near the nipple.

Fourth Motion.—This is applied to force the milk out of the breast. Place the hands opposite each other on the breast with the upper edge of the hand so curved that it will fit closely to the breast, Fig. 138. Now apply pressure gently, but firmly, pressing away from the edge

Fig. 137—Showing Third Motion for massaging the breasts, using the downward circular stroke, one hand, finger tips closed.

Fig. 138—Showing Fourth Motion for massaging the breast, using the palm and edge of both hands.

of the breast and towards the nipple all the hard lumps. In a few minutes this fourth motion will become painful then use the first motion, gently stroking the breast. If very painful, apply the second motion for a few seconds. Then again use the fourth motion. Repeat motions one and four until the whole gland is soft. From five to ten minutes for each breast is sufficient time. If the patient seems tired or exhausted before the treatment

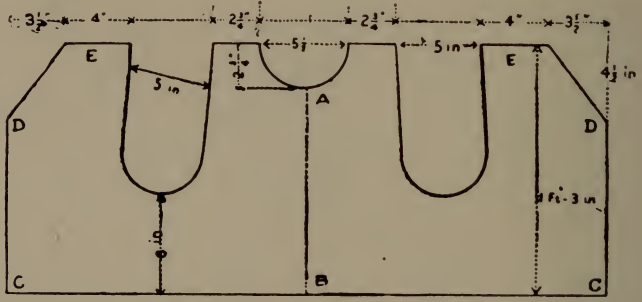


Fig. 139—Showing pattern of pressure bandage. Use a good grade of muslin.

is complete, put the breast bandage on and after a little rest continue the treatment until effective. When the breast pump is used to relieve the engorgement it should be after the breasts have been massaged. Always apply the breast bandage after massaging the breasts and remember to handle the breasts very gently at all times. If any hard lumps remain or the skin looks inflamed after applying the above treatment, report such a condition to the attending physician at once.

Fig. 140—Pressure bandage applied.

EXCESS OF MILK.

When the constant leaking of the milk is so great as to soil the clothing, the nurse should keep the breasts abundantly covered with sterile gauze which will soak up the excess. The patient should be given very little liquid and no starch or sweets and the bowels should be kept regular by Epsom Salts or Citrate of Magnesia. The excessive secretion at times is thin and watery and in large quantities. This will exhaust the patient and result in the illness of the child if it continues to nurse.

LACK OF MILK.

We generally find this state of affairs in mothers who are physically weak and mentally diseased. The baby

is usually puny. This condition is generally due to improper diet and worry or malformation of the breasts or nipples. To establish a normal secretion the patient should be made happy and comfortable. Massage the breasts as directed, using only the first and fourth motions. Allow a good liberal diet and in addition to her regular diet give chocolate, cocoa, very weak tea, oyster stew, barley and oatmeal gruel, eggs, and milk in large quantities. One tablespoon of nutrolactis three times a day is of great value. This is sold by all druggists. Beer or malt is also good, if the mother has been accustomed to the use of it. See that the patient drinks plenty of water and let the baby empty the breasts as completely as possible at regular intervals. The best stimulant for the milk secretion is a vigorous infant. Give daily sponge or full baths and briskly rub the whole body except the breasts with a coarse towel.

HOW TO DRY UP THE BREASTS.

1. Immediately after confinement.
2. During the nursing period.
3. At the end of lactation.

If for any reason, such as death of the child, it becomes necessary to arrest the secretion of the milk the following treatment will be found efficient.

To dry up the breasts immediately after delivery

before any secretion has formed apply the breast bandage, Fig. 139. This should be snugly pinned, Fig. 140, and the natural overflow under pressure should relieve the engorgement, but when they become too distended and painful they must be emptied by using the breast pump, after which the pressure bandage must be immediately applied. It is best not to massage the breasts in this class of cases. Give one ounce of saturated solution of Epsom Salts often enough to keep the bowels moving freely. Do not allow the patient to drink much liquid.

If it is thought best to dry the breasts up during the nursing period use the same treatment as in the case just mentioned, but the distention must be more frequently relieved by massage and the use of the breast pump.

At the end of lactation, the time to wean the baby, there is rarely any trouble in arresting the flow of the milk. All that is necessary is to relieve the tension of the breasts by massage (using the first motion), or the breast pump. Under this treatment the secretion usually ceases within a few days. Use the breast bandage if needed.

The first two conditions, before the flow begins and after it is established, must receive very close attention; in fact this will apply at all times, and prevent the development of any serious mischief.

HOW TO RECKON THE CORRECT DATE OF CONFINEMENT.

It is impossible to give the exact date when a confinement will take place, but a rule that will hold good in a large majority of cases is as follows:

Rule.—First consider the beginning of last menstruation; count back three months and add seven days.

Example.—Last menstruation began September 1st; count back three months to June 1st, add seven days which would make it June 8th, the date on which the confinement should take place.

TREATMENT OF DISEASES OF WOMEN IN GENERAL.

The many complaints so common in women are so varied in their natures that it is impossible to lay down a fixed rule for treatment, nor is it possible to give a home treatment which will be effective in every case. We have given elsewhere in the book a treatment for pelvic troubles in general and it may be applied for any condition which causes pain in the pelvis. The headaches, stomach troubles, and general nervousness are usually reflex and can be cured only by relieving the diseased condition in the pelvis.

PAINFUL MENSTRUATION.

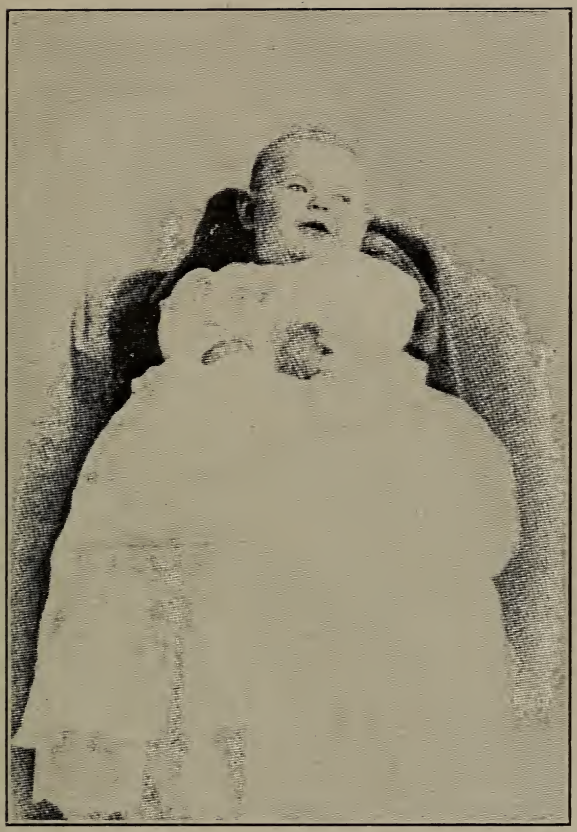
This we often find in young women and girls in their teens. It is caused by neuralgia, a low vitality of the general system, inflammation of the pelvic organs, undeveloped internal genital organs, or an obstruction, generally located in the cervix at the internal opening, which prevents the escape of the flow. The successful treatment of the affection depends upon the recognition and removal of the cause, and this can only be accomplished by consulting a physician.

HOT FLUSHES.

Many women have hot flushes during the menopause and after the removal of the uterus or ovaries. Great relief can be obtained by giving special attention to the general health. A hot bath lasting twenty minutes taken at bedtime, and cold sponge in the morning, and the following prescription will prove beneficial:

Ammonii Bromidi .....2 drams
Potassi Bromidi .....4 drams
S pts. Ammon. Aromat.....6 fluid drams
Aquae Camphorae enough to make 6 fluid ounces.

Take from two to four teaspoonfuls every four hours.



OUR BABY

GENERAL MANAGEMENT.

The first and most essential requisite in the management of the baby is the education of the mother. A

physician needs hearty co-operation in the home. There are so many important agents in the diseases of children that come under the head of simple home remedies such as diet; fresh air, baths, massage, etc., that a child cannot be treated the same as an adult and no two children are alike in physical equipment. Two points must always be kept in mind,—the benefit hoped for, and the possible harm which may result. The best possible remedies and the most careful attention are of little value if the patient is over-clad, kept in a stuffy over-heated room, or thrown in contact with people who are nervously exhausted. Some mothers become nervous wrecks from no other reason than lack of management in the daily life of their children. As system is essential in all other phases of life, so is it doubly important in the rearing of children. Beginning with his birth there must be a definite time for everything governing his life,—his meals must be regular and his nap insisted upon until he reaches the age of six years. His bath and airing must also occur at regular intervals. Thus do we insure perfect health and development into strong manhood.

A MOTHER'S KNOWLEDGE.

The best success with infants is attributed principally to well informed mothers. Reading matter along this line is vastly more important than the much exalted

cookbook. A mother must keep herself informed in case of sudden illness. She must be able to discriminate between a case that she can handle herself and one that needs the more skillful attention of a physician.

Never look lightly upon a sore throat or a persistent pain in the stomach. Stop the milk and give a dose of castor oil with the first indication of summer diarrhoea; then call your physician.

Plenty of fresh air at night and outdoor life at all seasons of the year are fitting doweries to award your baby.

A mother thus well informed may look for nothing but satisfactory results and officious relatives and neighbors will be forever tabooed.

THE NEW-BORN INFANT.

Naturally the first thought is concerning the cleansing process. A full bath should not be given during the first week or until the cord comes off. First, oil the baby with olive oil, then it can have a daily sponge bath, being careful not to wet the cord until it drops off.

The mother's milk does not appear until about the third day. During this time the baby should be fed ten grains of sugar of milk dissolved in an ounce of water which has previously been boiled. Give it one or two teaspoonfuls occasionally. It should be allowed to nurse from six to eight hours after labor.

The pulse and breathing are both much more rapid in an infant than in an adult.

The first two or three days the bowels should act six or eight times in the twenty-four hours, the first movement occurring about twelve hours after birth. The first discharge is dark in color, but by the fourth or fifth day it becomes a light yellow. At this time they should move twice in twenty-four hours.

As a rule an infant urinates at birth or at any rate within twelve hours; but no alarm need be felt if this does not occur before thirty-six hours have passed.

The mother should provide herself with the following articles for the baby:

A good wicker basket, furnished as follows:
A small fine comb.
A soft baby's hair brush.
Puff-box and puff.
Soap box and castile soap.
Eight ounces of saturated solution of boracic acid for mouth and eyes.
Tube of vaseline.
Bath thermometer.
One yard of sterile gauze.
Pair of small scissors.
An eiderdown blanket one and one-half yards long.
Three sizes of safetypins.
Soft towels.
Plenty of old linen for wash cloths.

The following is an average list of clothing necessary:

Flannel bands	3
Knitted bands	4
Diapers	doz. 4
Shirts (3 sizes)	6
Flannel petticoats	4
Muslin petticoats	4
Slips	8
Nightgowns	6
Socks	pairs 6
Wrappers	3
Jackets for the house	3
Shoulder blankets	2
Small comforters	3

Care of the Umbilical Cord.—The following is a good dressing for the cord after it has been tied by the physician: Take four or five thicknesses of sterile gauze about three inches square and slit one side to the center. Place next to the abdomen, cover the cord over with gauze and put on the binder. This should be left in place and raised up around the edge when the baby is bathed. It should be kept perfectly clean until the cord sloughs off; then in order to secure a rapid healing of the stump it is necessary to keep the parts perfectly dry. This is best accomplished by using the following powder very freely and then covering it over with a plain piece

of gauze, after which the binder is applied. Change often enough to keep the parts from becoming moist.

Powdered Salilcylic Acid.....grains 10
Powdered Boracic Acid.....grains 25
Powdered Amyl.....ounce ½
Powdered Zinc Oxide.....ounce ½

Have this prepared by your druggist and apply as directed. This powder can be used as a dressing around the cord before it sloughs off, as it will assist in causing the cord to shrink and will hasten its falling off.

BABY'S WEIGHT.

The average infant weighs about seven pounds at birth. During the first week it loses from one-half to two-thirds pounds, then begins to gain, and at the beginning of the sixth month its weight should double and at the end of the first year should treble. The average gain is from four to seven ounces each week for the first six months; after that the gain is relatively less. A regular gain is the ideal one. The following table devised by Dr. Carr will be found most helpful:

Table of Average weight During First Year.

Lbs.	Months.												
Birth	1	2	3	4	5	6	7	8	9	10	11	12	Months
7	8¼	10½	12½	13¾	14¾	15¾	16½	17	17½	18	18¾	20	Weight

During the second year the child gains about five pounds.

A baby loses weight in all acute infectious diseases; also in any stomach trouble. If there is a loss of weight in an infant that is nursing, and no other disease is present, the chances are that it is not getting enough milk. This can be ascertained by weighing the baby before and after nursing. When it is noticed that a nursing infant is losing weight and the food and digestion are not at fault, it may be that the mother is pregnant or the baby is taking some infectious disease. It is a good rule to weigh a healthy child every few days and a sick child daily.

APPETITE.

Children often refuse food and this may be attributed to various causes; a poorly ventilated room, for instance, or the first development of some disease. A constant desire on the part of the child to overfeed demands attention. It may be caused by worms. Kidney trouble may be detected by the desire to drink an excessive amount of water. Never overfeed a sick baby.

VOMITING.

All nursing and artificially-fed infants will vomit more or less in health, but severe vomiting with a rapid onset is an indication of some acute form of stomach or

bowel trouble. Remember also, that the acute infectious diseases may begin with vomiting. Uncontrollable vomiting occurring in the new born soon after birth, and persisting for days with no other sign of sickness, indicates that the opening into the small intestines from the stomach may be wholly or partially closed.

The vomiting of blood may occur under different conditions in diseases like measles, liver trouble and acute inflammation of the stomach. The blood may come from the nose or throat. Ofttimes an infant nurses blood instead of milk from the mother and vomits it up afterward. It is well in all cases to examine the mother's breast when a newly-born infant vomits blood.

The vomiting of bile has no special significance; it may occur in any severe vomiting regardless of the cause.

CRYING.

Kilmer gives eleven reasons why a baby should cry. They are as follows:

Hunger.—The cry of hunger is continuous and is accompanied by sucking of the fingers.

Thirst.—Continuous crying which stops when baby gets a drink.

Pain.—If caused by the pricking of a pin, the cry is sharp; if from colic, the cry is spasmodic, and is accompanied by a drawing up of the knees.

Wants Attention.—Baby very soon learns to like attention. He wants to be cuddled or rocked and cries until he is taken up and held. Begin when the baby is tiny to make him understand that you are to be obeyed. One of the hardest trials of a young mother's life is to hear her baby cry and not give in to him; but he will soon learn, and remember it is for your child's own good.

Sleepy.—A baby often fights against going to sleep.

Wet Napkins.—Always examine a baby's napkin if he cries.

Tired of One Position.—In very young or weak babies changing their position often stops their crying.

Frightened.—Babies are often frightened in a dark room or by bad dreams; then the cry is like a shriek. They should be taken up and soothed.

Exhausted.—Usually by a low moaning cry.

Temper.—A loud cry, accompanied by swinging the arms and kicking with the feet.

Uncomfortable Clothing.—His band or napkin may become wrinkled and hurt him. Take him up, straighten his clothes, and he will stop crying.

BABY'S FIRST HOME.

So many parents make the grievous mistake of keeping the baby in the arms the greater part of his waking

hours. This is not a good plan, for we are all prone to hold a baby too erect. The ligaments in the vertebra are not sufficiently developed to support the head and trunk. Spinal curvature is often induced in this way. On the other hand, do not allow a child to occupy its crib constantly. A good-sized clothes basket equipped with a good-sized pillow makes a safe playground for a baby until it attempts to walk or stand. At this time an exercise pen may be constructed—built on the plan of a large crib, so that the baby may be kept off the floor, away from draughts, stoves, older and rougher children, and still be given the opportunity for good active exercise.

SLEEP.

There is no other one thing so essential for a baby as good normal sleep. During the first few days of a baby's life the sleep is almost unbroken except when it is fed. Twenty-two hours each day are spent in sleep during the first month. At the sixth month the child should sleep from six P. M. to six A. M., with no other interruption than for feeding. The day naps can be shortened gradually as the child grows older. Be regular about his nap and no difficulty will arise concerning it.

BREATHING.

When a child breathes through the mouth, sleeps with the mouth open, snores in the sleep, and has a gen-

eral stupid appearance, consult your physician. These symptoms reveal the fact that the child has enlarged tonsils, adenoid growths in the back of the throat, or possibly a tumor in the nose. A child thus afflicted fails to increase in weight and the face is disfigured by a broadening of the nose at the base. Do not neglect this mouth-breathing, as it destroys a child's vitality very rapidly.

KISSING.

Never kiss a baby on the mouth, as disease is apt to be communicated in this manner. Parents should not only desist from this habit, but should insist on nurses and friends refraining from kissing the baby.

WEAK INFANTS AND DELICATE CHILDREN.

In the management of premature or delicate children three things should be considered: The air the child breathes, the nourishment, and the maintenance of bodily heat. A premature baby should be handled only when absolutely necessary and then in the gentlest manner possible. Use oil instead of water for cleansing during the first few weeks. Heat must be supplied artificially because the heat centers of the body are undeveloped. The stomach is small and the digestive powers weak, therefore the food must be of an easily assimilable character. While incubators are of great value in regulating the

heat, they are defective in supplying fresh air. We know of no better means of supplying artificial heat than by the use of the electrotherm. It is simple in construction and can be attached to any electric fixture like a drop light. It is placed between two or three thicknesses of blankets upon which the infant is lying in its little crib. The heat is readily regulated by the amount of electricity used. The body is kept at a uniform heat, and still a good supply of fresh air is given. The child's vitality is quickly lowered by allowing it to breathe air that is too warm. It is often kept at eighty or ninety degrees when it should be from seventy to seventy-two degrees.

Breast milk is almost a necessity for the premature baby, and if the mother is unable to supply it a wet nurse should be procured. If the baby is not able to nurse, use a breast pump for sufficiant milk to nourish it. Fourteen to fifteen feedings may be given during twenty-four hours, allowing the amount to depend upon the digestive ability of the child.

Never lose sight of the fact that a premature child is handicapped and needs unusual advantages. It rarely catches up in the first year, and sometimes not for two or three years.

BATHING THE BABY.

Mothers often entertain an incorrect idea in regard to bathing a baby when it is suffering from a cold. The

work of the skin in carrying off a cold is only aided by keeping the pores open and thus assisting the process. There is no better means than a bath in weak salt water (a teaspoonful of salt to a gallon of water) at a temperature of eighty-five to ninety degrees, followed by brisk rubbing. It is the sudden chill from undressing a child in a cold room that has bad results, not the bath itself. See that the temperature of the room in which you bathe a delicate child is raised to eighty degrees and it will never suffer from the effects.

THE SICK ROOM.

During the cold weather try to obtain a southern exposure where the sun has free access and in the summer the cooler the room the better. Remove all draperies or use only those which can be washed. The bare floor is better than a carpet. Keep the furnishings as simple and sanitary as possible. A sick child kept in an overheated, badly ventilated room is certainly at a disadvantage.

THE NURSE.

Much importance must be attached to the selection of the help with whom we intrust the care of our children. A nursery maid should be schooled for her position, but at any rate be sure that she fills the bill from a physical point of view. Nursery maids often develop pulmonary

tuberculosis. The lungs, nose, throat and teeth should be examined before they are allowed to assume a position. An impatient, ill-natured nurse should be forced to seek other employment.

THE FEEDING OF INFANTS AND CHILDREN.

In this chapter we will endeavor to give in detail the feeding of children in a manner which will be most valuable to the mother. Fixed rules will be given without going into the reason in detail. Formulas for artificial feeding and diet lists which have given the best results will be given due consideration. The chemistry and composition of food will not be discussed, for it is confusing and of no value to the average mother. A careful research of the latest, best grounded facts that medical science affords has been carefully considered in this article. No subject is so important or so fraught with responsibilities as the feeding of infants and children. More children die from improper feeding than from disease. Therefore, every mother should thoroughly master this subject.

Breast Feeding.—The feeding of infants demands the closest attention and best judgment. Every detail in regard to the length of time the baby nurses, the regularity and amount of nutrition taken must be carefully noted. No infant should nurse longer than twenty min-

utes, and sometimes ten or fifteen will suffice. If the infant nurses longer, say half an hour, you may be pretty certain the milk is deficient in quality and a specimen should be examined at once.

During the first month an infant should be nursed every two hours; during the second month, every two and a half to three hours. During the day wake him for his nourishment at regular intervals, but do not disturb him in the night between the hours of eleven and six. This will teach him to sleep during that time, which will be of advantage to the mother. If he becomes restless, change his position and give him a teaspoonful of plain boiled water or the same amount of a one per cent. solution of sugar and milk. This is made by adding ten grains of sugar of milk to an ounce of water. It might be mentioned here with profit that sugar of milk water of this strength is all the nourishment required by an infant the first two or three days of its life while the mother's milk is being established. It should be put to the breast six or eight hours after labor and until there is plenty of milk, as there usually is on the second or third day, allow the baby to nurse two or three times during the day. These rules apply to perfectly healthy children only.

When an infant is being nursed properly and still the milk does not seem to agree with it and causes stom-

ach and bowel trouble, it may be that the milk is too rich and should be examined. If the mother does not furnish enough milk, the child will require artificial food probably at every other feeding. When this is the condition, everything should be done to increase the mother's milk. This will receive attention in the article on Care of the Breasts.

The mother should be very careful as to what drugs she takes while nursing her child, as a great many drugs can be transmitted to the infant through the milk. None should be taken unless prescribed by the Physician. Some foods, as cauliflower, turnips and onions, impart a disagreeable flavor to the milk.

The exhausted condition of the mother after confinement certainly calls for rest. Sleep is imperative and some sort of stimulant is required. Accomplish this by giving some good wholesome food at intervals; chicken or beef broth or some sort of gruel, for instance. If warm liquids are not agreeable, try cold buttermilk, iced tea, or iced champagne. Ice cream will also prove nutritious in some cases. If the pelvic condition is normal, it is better not to give solid foods for the first three days, but turn your attention to milk, broths, gruels, or anything that tends to stimulate the milk glands. If the bowels are sluggish, give prunes, baked apples, buttermilk, or anything that will assist nature along this line.

If they continue to be sluggish and the milk is still insufficient, give a large tablespoonful of castor oil. When the bowels get regular the diet can be more general, consisting of breakfast foods of all sorts with plenty of milk, prunes, oranges, grapes, apples, soft-boiled eggs, eggs on toast, tea, coffee, cocoa, soups, not too highly seasoned, junket, gelatine, or custards.

We often find infants who are wholly breast-fed suffering from stomach and bowel trouble, for the reason that the mother does not take enough exercise or is extremely nervous. Menstruating while nursing or insufficient attention to the diet may have a like effect. In such cases the baby is far better off if removed from the breast, for a woman must keep herself in a normal condition.

When to Begin and What to Feed a Nursing Infant.—After an infant is six months old and up to this time has enjoyed perfect health, additional food may be given. An infant enjoys a small piece of zwieback; it is hard and is good for the gums. The white of a raw egg (albumen water) may be given every other day, also a little weak meat or chicken broth in which barley has been cooked. The broth should be strained. An infant can have this sort of a diet if given sparingly until weaning begins. The flour ball, as mentioned in "Artificial Feeding," may also be given at this time.

It is surprising to note the number of mothers, especially among the wealthy classes, who are unable to nurse their children. Statistics show that while ninety per cent. in the poor classes can perform this duty, only about seventeen per cent. of the wealthy classes are able to do so.

The Wet Nurse.—If a wet nurse is to be procured, she must be a perfectly healthy woman who is nursing a baby of her own who is as near the same age as yours as possible. The selection of a wet nurse is of great importance and should be left to your physician.

Artificial Feeding.—When it is necessary to feed a baby from the bottle, every detail must be carefully watched. It is appalling to note the number of infants and children who die each year from stomach and bowel trouble. The cause is invariably improper foods. Mothers who are compelled to rear their babies on a bottle do not err from lack of feeling, but from want of knowledge as to ways and means. A careful study of the following hints will give them an idea of the care that is required for artificially fed infants. A careful mother will study this important subject and rely upon the opinions of good authorities. Haphazard infant-feeding should be done away with entirely. Too much stress cannot be laid upon the necessity for mothers to consult some good book or physician who is an authority

on the artificial feeding of infants. Directions obtained from such a source should be followed to a letter. As a rule, mothers and nurses are apt to feed a baby every time it cries, and this only makes bad matters worse. If the baby is sick and fretful it should receive even less food than usual. If a grown person is ill he cannot eat all the time, and the same is true of an infant.

In artificial feeding one should go about it intelligently, adopting none but the best methods. Dr. Edwin Rosenthal advocates the use of the flour-ball which is prepared as follows:

Plain wheat flour boiled in a bag for five hours; then bake in the oven until it is thoroughly dry and hard; break it open and throw away the rind and grate the inside to a powder. For a child one month old use this formula:

Formula No. 1.

Scalded milk ..... ½ pint
Sterile water ..... 1 pint
Grated flour ball ..... 1 heaping tablespoonful

Place the milk on the fire and heat it, rub the flour to a paste in the water and add the milk. Bring this to a boil and put on ice to cool. Finally add enough raw milk to make two pints in all. Heat only the amount required at time of each feeding. Give two ounces every two hours to a child one month old and increase it one-half ounce

each month. When the child reaches the age of six months use the following formula:

Formula No. 2.

Flour ball	1 teaspoonful
Rice water	4 ounces
Raw milk	4 ounces
Granulated sugar	1 teaspoonful

If the child appears hungry after a bottle of this food, and the stool has a yellowish, pasty appearance, increase the milk and decrease the rice water proportionately.

Home Modification of Cow's Milk.—Experience teaches that home modified cow's milk is also an ideal artificial food. Volumes have been written explaining and demonstrating this fact. Accept this truth and we will explain in detail how the modification is accomplished.

Selecting the Milk.—The best quality of milk should be used. Those who live in the country or in small towns can easily obtain good milk by teaching the farmer to be clean; but in the large cities, especially where there are no milk laboratories or certified milk dairies, mothers must trust to the honesty of the men who sell milk. It is difficult to secure the pure article from the average dairy.

Never take the milk from only one cow when it can be avoided. Herd milk is much better. Jersey milk

should never be used as it is too rich. The milk should be unskimmed and should be procured from a reliable dealer whose cows are healthy and carefully kept and not fed upon swill or other refuse material. Every possible means should be employed to insure absolute cleanliness while milking. That is, regarding the hands, the milk pails, and the cows.

Testing the Milk.—One can judge the quality of milk to a great extent by its appearance. It should not have a bluish tinge, but should be of a yellowish white color. This is also the best way to ascertain the amount of cream.

Care of the Milk.—The milk should be cooled rapidly and placed in clean glass bottles or jars. When cool they should be sealed. When possible (especially if it is to be transported some distance) it should be packed in ice. If delivered immediately after milking, it should be poured into quart bottles and placed on ice for six hours, in which time the cream will separate. In case it is not convenient to have ice, set the bottle in a pan of cold water and change the water often. When the milk is placed in bottles at the dairy the cream is generally separated by the time it is delivered. In this case the milk and cream can be used at once, but should be kept cold.

Articles Required.—Equip yourself with the following articles for the home modification of cow's milk:

A glass graduate giving the measurements in drams and ounces.

A two quart pitcher, either glass or porcelain.

One small funnel.

One large spoon.

One dozen four-ounce bottles. Later use the eight-ounce size. There is a bottle on the market called the Hygienic Nursing Bottle which is very good.

One dozen anti-colic nipples. These have a round tip with three holes which insures a slow steady flow of milk.

One ordinary saucepan for heating the milk.

One high saucepan for warming the bottle.

Some non-absorbent cotton for plugging the bottles.

It is impossible to give any fixed rules for the artificial feeding of infants, as infants differ as do adults, some requiring more food than others. What agrees with one may act as poison to another. Their likes and dislikes must be satisfied. We will give several formulas from which to choose.

Having secured the best grade of milk with the required amount of cream, the following formula can be used to good advantage, as it is one of the best:

Formula No. 3.

Cream	1½ ounces
Milk	1½ ounces
Barley water	3 ounces

To every six ounces of this mixture add two grains of citrate of soda.

The cream from the top of the bottle may be used or it may be obtained separately. In the latter case the cream should be poured from the top of the bottle and the milk used as directed. This formula has given the best and most universal satisfaction. It is the ordinary formula for a child three months old. From the first to the third month it would be necessary to give an ounce more of barley water, half an ounce less of milk and half an ounce less of cream. The proportions would then be four ounces of barley water and one ounce each of milk and cream.

To make the barley water take one tablespoonful of prepared barley (Robinson's) and two tablespoonfuls of sugar of milk (chemically pure) and mix this thoroughly with a little cold water. Stir gradually into one quart of boiling water and let come to a boil; then turn the fire low and let simmer fifteen minutes. If the ordinary stove is used, the mixture can be set on the back part of the stove. This should be made fresh every twenty-four hours and is best if kept on ice when not in use.

At each feeding the above formula is prepared; that is, the cream, milk and barley water and citrate of soda in the given proportions are warmed to the proper temperature.

Citrate of soda put up in two-grain powders, Robinson's prepared barley, and sugar of milk can be secured at any drug store.

Formula No. 4.—According to Dr. Louis Fisher this formula is excellent for a child from time of birth to the age of one month.

Raw cow's milk	4 ounces
Rice water	16 ounces
Granulated sugar	1 ounce

Mix thoroughly and heat until the steam rises. Continue steaming at this temperature for ten minutes.

Divide into ten bottles (two ounces each), insert in the necks of the bottles large cotton stoppers. Place the bottles in the refrigerator, but not on the ice. Warm before feeding by placing the bottles in a deep saucepan filled with hot water. Let the food remain in this until it reaches the body temperature.

Formula No. 5.—This is for a child from one to two months old.

Raw cow's milk	7 ounces
Rice water	20 ounces
Granulated sugar	1½ ounces

Divide into eight bottles, each bottle containing about three ounces. Feed every two and one-half hours.

Formula No. 6.—For a child two to four months old.

Raw cow's milk ..... 12 ounces
Rice water ..... 23 ounces
Granulated sugar ..... 1⅓ ounces

Divide into seven bottles, each bottle containing about five ounces. Feed every three hours.

Formula No. 7.—For a child four to six months old.

Raw cow's milk ..... 22 ounces
Rice water ..... 20 ounces
Granulated sugar ..... 1 ounce

Divide into six bottles, each containing five and one-half ounces. Feed every three hours.

Formula No. 8.—For a child from six to nine months.

Raw cow's milk ..... 28 ounces
Rice water ..... 12 ounces
Granulated sugar ..... 1⅔ ounces

Divide into five bottles, each bottle containing about eight ounces. Feed every three and one-half hours.

Formula No. 9.—For a child from nine to twelve months.

Raw cow's milk ..... 27 ounces
Rice water ..... 5 ounces
Granulated sugar ..... 1⅔ ounces

Divide into four bottles, each containing eight ounces. Feed every four hours.

When there is any stomach or bowel trouble and the child vomits after taking nourishment and there is also an abnormal condition of the bowels, accompanied by colic, the milk should be discontinued and broths made from chicken, mutton, or veal thickened with rice and toasted bread crumbs should be given. This is for a child over one year old. If younger, use barley water, egg albumen, gelatine, or Formula No. 1.

For infants under one year who cannot retain milk and are troubled with diarrhoea and vomiting, Fischer recommends trophonine in teaspoonful doses every hour. It is in this class of cases where the child cannot assimilate cow's milk in any form that we are compelled to resort to prepared foods that are placed on the market, such as Nestles Food, Horlick's Malted Milk, Mellins Food, and many others which are more or less popular. Suffice to say that the different foods mentioned can be purchased from any drug store and full instructions accompany each package.

In conclusion we wish to mention another good substitute for mother's milk, which is buttermilk. To prepare it we add one teaspoonful of rice flour to one quart of fresh buttermilk; heat the mixture, meanwhile constantly stirring it, until it has boiled up three different times. Then add two tablespoonfuls of cane sugar. It is better to use new enameled ware in preparing this food.

Buttermilk thus treated has a yellow color and in feeding it to children the Hygienic bottle should be used. If it coagulates it should be shaken occasionally. Some times buttermilk will cause occasional vomiting and diarrhoea, but it is not very severe and will subside. If it should become severe, it may be necessary for the physician to prescribe, but continue the same diet. When a child is accustomed to buttermilk, a change to sweet milk will often cause diarrhoea. It is well to remember that the stools from buttermilk feeding as well as from a milk diet have no fixed normal appearance. The buttermilk diet forms a good one for wasting diseases or for children just recovering from any acute fever. The same amount should be given and at the same intervals as any other milk diet would be.

After a child is a year old begin gradually to give him a mixed diet composed of the ordinary foods which you are accustomed to using upon your table. Use discretion and do not over-feed, especially at the evening meal. By the time he is three years old give him only three meals a day and put him on a regular diet. The chapter on diet will furnish a list of liquid, soft, and general foods from which to choose.

CARE OF THE BOTTLE AND NIPPLE OF AN ARTIFICIALLY FED INFANT.

We thoroughly advocate the use of the hygienic, graduated bottle. It should be boiled once a day, scrubbed with a stiff brush and left to stand in borax water until it is needed. Two teaspoonfuls of borax in a pint of water is used. The straight black nipple is preferred because it can be cleaned easily. Always turn a nipple inside out and clean carefully with a stiff brush. It should also be boiled once a day.

NUTRITION AND GROWTH.

It is a pitiable fact that children suffer more than do the lower animals from lack of nutritious food. The diet during the second year is apt to consist of milk, which in cities is of a poor quality, together with insufficiently cooked cereals, boxed breakfast foods, crackers, etc. The food at this age should be highly nutritious and given at regular intervals. Eating between meals cannot be too strongly condemned.

The diet should consist of red meat once a day, poultry, eggs, milk, fish, whole wheat bread, cream, well-cooked cereals, plenty of vegetables and fruit.

The next important factor is good fresh air. Most American mothers are afraid of fresh air. The nursery should be well aired every day by means of the windows

and a fire place if possible. If a child is delicate, dress him as if for going out and then wheel him about the room for an hour with the windows wide open, regardless of the weather.

A growing child should never be overtaxed with duties of any sort. The present system of crowding in our public schools is most deplorable. No child can do hard mental work and develop physically at the same time, and what do intellectual attainments amount to if a child is hampered by a weak or diseased body.

ERRORS IN FEEDING CHILDREN.

The bottle-fed baby suffers most from over-feeding. The amount of liquid is nearly always too large and the intervals between meals too short. Keeping a child on milk alone until he is a year old is also a mistake.

Irregularity is another thing to be avoided. The meals should be given right on the dot. This forms regular habits in regard to his appetite and it is your duty to discover the cause if he is not hungry.

CARE DURING THE SUMMER MONTHS.

Too much care cannot be given the little ones during the hot summer months. The milk that is given to the child should be placed on ice at the time of its delivery and kept there until time to prepare it for the baby.

If you live in the city it is best to weaken the milk a little. True, baby may not gain so much in weight, but he will hold his own and will get through the hot months without any intestinal disorders.

Do not overdress the baby during the hot days. He is only human, dress him as you would like to dress yourself. Give him frequent drinks of boiled water between meals. Also give two or three times daily a sponge bath containing one teaspoonful of common soda to each pint of water.

If the baby vomits or the stool has a greenish color this is a danger signal and the milk should be withheld for a time, and a dose of castor oil should be given at once.

Fresh air is a very important factor at this time. Avoid the sun, but give him plenty of outdoor life.

See that baby has a two-hour nap in the middle of the day until he is in his third or fourth year.

No little stress may be placed on the mother's habits. She must be very careful of her own condition, diet, etc. If the mother suffers with constipation, so will the baby, and it is very important to keep his bowels open. Eat three good plain well-cooked meals a day and the baby will stand twice the chance of doing well.

The simplest case of vomiting or diarrhoea should never be neglected. Give two teaspoonfuls of castor oil

at once. Stop the milk and use barley or rice water until the physician can be called.

WEANING THE BABY.

The time to begin weaning a baby is at the eighth month and should be completed by the ninth month. The weaning should be gradual, by reducing the number of breast feedings and substituting the bottle, or if it is difficult to have them take the bottle they can be fed with a spoon or learn to drink from a cup. This gradual weaning will prevent any trouble occurring in the mother's breast, and at the same time give the baby's stomach a chance to accommodate itself to the new food. The substituted food during weaning must not be so strong as it would have been if the infant had been fed artificially from birth. Therefore, at first give a baby who is being weaned, food that would be suitable for a four months' old baby. The strength and amount of the food may be increased gradually and by the time a child is a year old it may begin to take milk full strength. It is best not to begin weaning an infant during the summer months if it can be avoided. Some infants will be very stubborn about giving up the breast. These cases will require great tact and judgment.

Some mothers have an idea that they cannot become pregnant while nursing a child, this is not true, and a

woman who becomes pregnant should wean her baby at once. Mother's milk after the ninth month is of little value, in fact, it is harmful, as it does not contain all that is necessary for the proper nourishment of the baby. The way to begin is to give the baby only one bottle a day. The child is nursed at its other meals. As time goes on the bottle feedings are gradually increased in number and strength. If for any reason it is necessary to wean rapidly, full instructions to dry up the milk are given under "Care of the Breast."

SCARLET FEVER.

Scarlet fever is an acute infectious disease common among children—characterized by a rapid onset, vomiting, sore throat, fever and red rash, very fine pin point in appearance.

Symptoms.—Languid feeling, headache, nervousness and occasionally in small children convulsions—loss of appetite and sore throat. These beginning symptoms may last three or four days at the most but usually not over twenty-four hours. The onset of scarlet fever is more rapid than any other of the infectious diseases. Often times a child may pass a restless night and be taken with a violent vomiting spell on waking in the morning—it will seem very weak and ill, pulse becomes rapid, and a high fever develops within two or three hours. In some cases

a sore throat will be the first marked symptom. The skin is hot—the eyes appear bright and the pupils contracted —the tongue becomes coated and there is a feverish odor to the breath. After these symptoms last from twenty-four to thirty-six hours the rash appears. The heat of the skin is intense—the appearance of the rash is abrupt, spreading rapidly and covering the body and limbs within four or five hours after its first appearance. The rash generally begins on the neck. In mild cases all parts of the body may not be affected.

It is of a bright scarlet color, a uniformly diffused redness which disappears entirely upon pressure leaving a white, bloodless skin for a moment after the pressure is removed.

The course of the disease is from five to eight days and the improvement is noticed when the rash begins to fall and the above symptoms subside. In about six days the skin becomes rough and dry, and scales begin to form both in large and fine flakes.

This peeling process continues from four to eight weeks and it must be remembered that there is danger of contagion as long as this is going on.

Treatment.—The patient should be placed in a large well ventilated room, with plenty of sunlight and a free circulation of fresh air. The windows should only be closed when giving a bath or changing the clothes. The

clothing should consist of the ordinary night gown, and light gauze undershirt and the customary bed-covering.

The urine should be examined daily by the trained nurse or attending physician. This can be done at the home. You should buy a few test tubes and two ounces of nitric acid for this purpose.

If the child is bottle-fed reduce the food one-half, using boiled water, that is if he is taking four ounces of food, give two of water and two of the milk mixture while the acute fever stage lasts.

In older children restrict the food during the entire course of the disease—during the acute febrile stage give a varied liquid and soft diet, composed of milk, broth, fruit juice and gruels. Do not over feed. Give plenty of water to drink. The ordinary diet to which the child has been accustomed should not be allowed until from four to six weeks after the beginning of the attack. This will also depend upon the severity of the case.

The bowels should move regularly each day. A glass of malted milk mixed with two teaspoonfuls of ground chocolate given for the last nourishment in the evening will help to keep the bowels regular. If necessary give an enema daily. During the acute febrile stage Citrate of Magnesia will be found of great service. Give from two to four ounces, according to age of the child and

repeat if necessary. Aromatic Cascara may also be given in teaspoonful doses at bedtime.

The most important treatment is to keep the general system in the very best condition possible and this is accomplished by good nursing, strict attention to clothing, diet, sleep, fresh air, daily bowel movements, quiet, and everything that may promote the child's comfort and well being.

Allow only one person in the room at a time and let this one be a nurse who is pleasing in every way to the patient. Some children prefer their mother, others a stranger. Change the nurse if necessary until the child is happy and contented in her presence. To control the fever, nothing is better than sponging every hour with water at about 90 degrees F. Should this fail, the cold pack may be resorted to. Because the child has a rash is no reason that the sponging should not be used. High temperature at the beginning shows that we have a severe infection to control and this sponging and cold pack will lessen the temperature and heart beats and save the strength of our patient. Scarlet fever causes an intense itching and burning of the skin which is relieved by sponging and cold pack.

A generous application of good cold cream twice a day will also be of value. This helps to prevent the danger of infection spreading at time of scaling.

Scarlet fever is a disease of childhood and nursing babies rarely become infected.

From four to seven days elapse after the child is exposed before the disease makes its appearance. The greatest danger of infection is during the scaling process, as it can be carried in articles of clothing or furniture: for this reason keep the room as bare as possible of all things which cannot be washed.

There is no specific medicine for scarlet fever; many cases would pass through the entire illness with good nursing by following the above instructions but it is so dangerous and complications are so frequent that it is wise to consult a physician as soon as the attack begins.

THE COOL PACK.

That there is any danger in the use of cool water in cases of measles, or scarlet fever is a mistake and we want to correct it at once by explaining it to the mothers. The cool pack is valuable in many instances and is prepared as follows:

Use a rubber sheet to protect the bed, cut slits in a Turkish towel large enough to admit the arms and wrap it about the trunk and buttocks. This leaves the arms and legs free. Then moisten the towel with water at a temperature of ninety-five degrees. In two or three minutes repeat with water at ninety degrees, then at eighty-

five, then eighty degrees. Watch the temperature and cool the water accordingly as low as sixty degrees if necessary.

MEASLES.

Measles in itself is a simple disease, not dangerous except as complications arise. Very few children escape this disease and all depends upon good careful nursing.

Measles is an infectious disease of childhood. The first symptoms may be easily mistaken for a severe cold. It begins with a running at the nose and eyes which makes its appearance about nine days after the child has been exposed.

Symptoms.—The first indication is a running at the nose, attended by slight fever and chilly sensation. The face becomes flushed and the eyes are watery and sensitive to the light. The child sneezes frequently and a dry cough develops. The fever increases toward night possibly two degrees and by the second day the child is very sick. The bronchial trouble increases rapidly and is accompanied by a headache. Soon a little rash may be seen on the palate. This appears about twenty-four hours before it is noticeable on the body. Three or four days usually elapse before the rash appears and then it may first be discovered on the neck and back of the ears, then the whole face, and within a day it extends to the chest and shoulders, and soon the whole body. Measles may be

distinguished from other like diseases because the rash disfigures the features, causing a swollen, distorted appearance.

The eruptions leave in the same order in which they appeared and disappear entirely by the eighth day.

Treatment.—While this disease is simple in itself, complications may be averted by making the patient as comfortable as possible. Keep the room dark and well ventilated and the skin absolutely clean. Give two baths a day with frequent applications of cocoa butter, lanolin, or any soothing oil. Keep the child in bed until after the scaling-off process.

Reduce the diet. If still on a bottle, dilute the milk with equal parts of boiled water. This must be adhered to only during the first few days.

Give plenty of water to drink at a temperature not lower than 50 degrees F. See that the bowels move freely each day. Use an enema if necessary. Examine the urine every other day for albumen. The eyes should be bathed freely every hour or two with a five per cent. solution of boric acid, applying it with old linen which has previously been boiled. Whether the fever demands it or not the bathing twice a day in tepid water is most essential. Follow with oil of some soothing nature as it relieves the itching, induces sleep and adds to the general comfort of the patient.

If the rash is slow in appearing use a hot bath of a temperature of 105 degrees to 110 degrees F., occupying about five minutes for the bath. If the cough becomes troublesome enough to disturb the night rest, give one-half to one teaspoonful of the following mixture: Honey, Glycerine and Lemon Juice, equal parts.

Watch carefully the temperature, the condition of the lungs and heart. Keep the air in the room moist and free from dust by means of a few drops of oil of eucalyptus added to an open dish of water and kept simmering in the room.

The food must be light and easily digested and is better taken warm. If one adheres to these suggestions, complications are not at all apt to rise.

GERMAN MEASLES.

German measles do not require very much treatment. Watching the diet and keeping the bowels well open is about all that is necessary. It lasts only about six or eight days. It usually causes a swelling of the glands of the neck which may be relieved by hot applications if it becomes severe. This is entirely distinct from measles and a child may contract both diseases within a few weeks of each other. The symptoms are practically the same as in measles only in milder form.

CHICKEN POX.

This is a disease most common before the age of ten years, very seldom occurring after puberty. A young child better be kept in bed and always in the house.

Symptoms.—Fretfulness, a restless wakeful condition, accompanied by a bad stomach, oftentimes backache, slight fever and general indisposition. An eruption like a small pimple with a white point appears first on the face and neck, gradually spreading over the body. The itching is the most annoying feature, as infection from the nails is apt to be caused when the child seeks relief by scratching.

Treatment.—During the time of eruption the child should be given a tub bath. Some good cooling oil used after the bath will be found beneficial. The disease from the beginning to the time the crust falls, is of about three weeks duration and a quarantine should be observed until the skin is entirely clear.

A sponge bath of tepid water with boric acid—two tablespoons of boric acid to one-half gallon of boiled water, should be given several times during the day.

MUMPS.

This is an acute, contagious disease, which affects the paratoid and salivary glands and may affect the breasts

in the female and the testicles in the male. From the swelling of the glands until it entirely subsides occupies about ten days.

Symptoms.—A stiff sore sensation in the jaw, especially if something sour is eaten, and swelling of the glands are the first symptoms. Headache and nausea follow. The swelling fills the space under the ear and down to below the chin. The temperature varies from 102 degrees to 104 degrees F. Pain is caused by moving the jaw, mastication being for a time almost impossible. There is a ringing in the ears, dizziness and nervous irritability. If the child has reached puberty the spreading to the other glands is not uncommon and is the feature to be dreaded.

Treatment.—As long as there is any temperature the child should be kept in bed, and until the swelling subsides should not leave the house. Put the patient on a liquid diet avoiding all fruits or acids. Keep the bowels well open. Control the temperature by means of sponge baths if it reaches 104 degrees F. If the pain in the glands becomes severe, apply cloths (old soft napkins preferred) wrung out of hot water and change every twenty or thirty minutes. During the night use a flannel with warm camphorated oil bound over the parts affected.

DIPHTHERIA.

Diphtheria is an infectious, contagious disease caus-

ing an inflammation usually of any mucous surface. It involves the nasal cavities, lips, mouth, larynx, trachea and bronchi. There is always a slight fever; the breath has a very offensive odor such as does not occur in any other disease. The disease is characterized by great prostration and inflammation of the throat. In the first stages it is easily confused with Tonsilitis.

Symptoms.—The first symptoms are a sore throat and a slight fever which increases quite rapidly sometimes to one hundred and three (103) degrees Fahrenheit. In some instances the first symptoms are very severe, in others so mild that the child may play about the house several days before the disease is discovered. In Diphtheria a single small patch appears first on one tonsil rapidly increasing in size as the odor from the breath is noticed. Oftentimes the entire throat may be covered before any attention is paid to the disease. A discharge from the nasal passages may appear before it is known that the disease is present, and this discharge should always be looked upon with suspicion for in these cases the symptoms are very severe and unmistakable. When a membrane on the tonsils develops the glands in the neck at the angle of the jaw become enlarged and tender. This is almost a sure indication of Diphtheria as it does not occur in Tonsilitis, or mild sore throat. The child has an increased temperature, perhaps mild delirium and gen-

eral discomfort. Heart complications are also common. The severity of the disorder doubtless brings on a disturbance of the nervous mechanism of the heart.

Treatment.—The delay in the use of Antitoxin is responsible for a great many deaths from Diphtheria. Much valuable time is lost by waiting for even ten or twelve hours for the report of a culture. Giving Antitoxin at the earliest possible moment that you are sure of the presence of the disease is the only safe course to be pursued. In many cases Antitoxin is given in too small doses even by persons who are familiar with its use. When there is membrane on the back part of the palate or in the nose never wait for the report of the culture, but give a full dose of Antitoxin at once. Repeat in eight or twelve hours if the membrane has extended or if there is no change in its appearance. If the membrane loosens or curls at the edges or takes on a granular appearance after the first dose it may be safe to wait twelve hours before repeating. Any lessening of the nasal discharges, or of the offensiveness of the breath and the glandular swellings and falling of the temperature are all good indications of an improved condition, but we cannot rest here. The clearing up process must be prompt and complete and more Antitoxin administered if this is not the case. Antitoxin is an antidote for poison and enough must be given to neutralize the poison.

The use of Antitoxin has reduced the mortality of Diphtheria from fifty to sixty-five per cent. Best results can be obtained by using it in its first stages. The patient should be kept in bed during the first week of convalescence and given the most nutritious food. As the strength and general health improve, physical exercise may be increased. Very careful attention should be given to the heart and nervous system. The kidneys also need close attention. The application of dry heat several times during the day will prove of benefit in restoring the normal action of these organs. The temperature is rarely high enough in Diphtheria to require any means of lowering it. When the heart action becomes weak some stimulation is necessary.

CROUP.

Croup.—This is an acute or chronic condition of the larynx. The onset may be sudden or gradual. One of the early symptoms being a hard dry cough, barking in character. This increases toward evening. When the onset is sudden the child may retire in apparently good health and awaken in a few hours with a characteristic cough.

Symptoms.—In some cases croup begins with a sharp chill, a sudden rise of temperature, rapid pulse and in some instances slight delirium, especially during the early or middle part of the night.

Treatment.—For the simple cough the expectorant and steam heat answers admirably. This treatment should be preceded by a dose of from one to three teaspoonfuls of castor oil. Begin the treatment early in the morning so that the full importance of the remedies may be felt at night when the cough is the most violent. A cold compress applied locally may be used for older children. See that the cloth is folded so that there may be six thicknesses of the material, wring this from cold water sixty degrees Fahrenheit and place it about the neck under the chin extending from ear to ear. Cover this with a silk or rubber tissue held in place by strips of cloth fastened at the top of the head, or a simpler way would be to take a perfectly dry Turkish towel and fold it in several thicknesses and use in the same way. All good effects are lost if this compress is not kept closely about the neck. The inhalation of steam is an effective remedy, but it is a little difficult to use it with only the simple appliances found in an ordinary home. An umbrella inverted over the crib with draperies of some sort to hold the steam in, is a simple and effective manner when nothing better is at hand. Keep the child under this treatment for from twenty minutes to one-half hour. In cases of croup the first object is to relax the muscles about the throat and dislodge the mucous. This is best accomplished by causing the child to vomit. For this purpose administer equal parts of honey and powdered

alum until it has the desired effect. A mother whose children are subject to croup should keep on hand some calcidine tablets one-third grain. Keep them in a well corked bottle and in a dark place. These tablets can be purchased at any drug store. The dose for younger children is one tablet dissolved in a little hot water to be given every fifteen minutes until there is some improvement; then lengthen the intervals between doses. Older children can take two to three tablets at a dose. This remedy has proven of great value in croup.

The evening meal should be very light. See that the stomach and bowels are kept in perfect order and it will assist in controlling this trouble. Use this treatment until your physician arrives.

TYPHOID FEVER.

Typhoid Fever is characterized by a continuous fever running a typical course and the disease manifests itself in several different ways at the beginning. It is a disease which affects the intestines and has a tendency to lower the vitality of the system and puts the patient in such a condition that inflammation in any organ is likely to occur during the fever or after it has subsided. The disease occurs in youth and early adult life and especially in the early fall.

Symptoms.—Typhoid Fever begins by causing the

patient to feel very tired and worn out, with a desire to lie down and having very little ambition. There is a severe headache occurring sometime during the day,—usually frontal headache and occasionally very severe. Sleep is poor and a general loss of appetite and a dullness affecting the whole system, are the conditions which last for a week or ten days. The patient also suffers from flashes of heat with increased dullness and confusion of intellect. In some cases there is more or less pain in the muscles, back and limbs. The temperature increases each day and the pulse is more rapid. The temperature in the evening is one or two degrees higher than in the morning, but at no time is the patient free from fever. Usually at the end of the first week the acute symptoms, such as headache, pains and chilly sensations, subside. There is a continuation of the fever and it is generally the highest during the second week at which time it begins to subside. A case of Typhoid Fever usually runs a course of three or four weeks. As a rule it does not occur in very young children.

Treatment.—The general care of typhoid depends largely upon the nurse. It is doubtful if there is any other disease that has had as many different kinds of treatment outlined for it by different doctors as has typhoid, and the main object is to keep the intestinal tract in as good a condition as possible and support the

patient to combat the fever. A typhoid patient should have the best room in the house with plenty of air and absolute quiet and the linen should be changed every day,—oftener if it becomes soiled.

One attendant in the room at a time is all that should be allowed. A typhoid patient should be sponged twice a day; if the temperature is at any time over one hundred and three degrees, a sponge bath should be given every hour. Careful attention should be given to the mouth which should be washed several times a day with a good antiseptic, something like Glyco Thymoline diluted one-half with water, or some good mouth wash may be used. A child may be sponged in water at a temperature of seventy to eighty degrees for one-half hour; if the child does not object too strongly this can be done every two or three hours.

A cold enema may be given if the temperature is running high. It has its advocates and will do a great deal of good. It should not be used lower than seventy or eighty degrees and unless the temperature is very high it should not be used. Possibly one of the best means of reducing the temperature and which will not cause any shock is a cold pack which has been explained elsewhere in this book. It is claimed by good authority that this controls the temperature better and more effectively in children than either the sponge or tub bath.

Discharges from the bladder and intestines should be received in a vessel containing an antiseptic, bi-chloride of mercury solution one to one-thousand; this is cheap and very effective.

Feeding Typhoid Patients.—In feeding typhoid patients many factors and conditions are to be taken into consideration. There is a great tendency to feed the patient on a strictly milk diet, but personally we do not think it is the best diet for cases of this kind. It causes a great deal of gas to form in the bowels and also produces constipation and has a tendency to keep up the temperature. A diet which has given the best satisfaction consists largely of gruels which can be made of cracked wheat, barley, oatmeal, or any of the uncooked cereals. They are prepared by boiling for two or three hours two tablespoons of cereal to one pint of water, then add enough boiled water to make a pint, or follow the formula for preparing soft diets as given in a previous chapter. If the gruel is too thick for drinking, more boiled water may be added. This can be seasoned to suit the taste. Chicken broth or mutton broth may be added as desired. A few ounces of this gruel may be given every three hours as the age and condition of the child demands. A patient suffering with typhoid fever should have plenty of water to drink between the times for taking nourishment. Lemonade, weak tea, or weak

coffee may be given in place of the water. When the temperature becomes lower each day there can be a little increase in the diet, toast, crackers, scraped beef, and a soft boiled egg may be given. This sort of food should not be given as often as the gruels. This line of diet will support the general strength of the patient, which is the main object in view and it can be varied so that the patient can be satisfied. Ice cream, if properly prepared of good milk with a very little corn starch added and eggs if desired, is most grateful, especially when the temperature is high and given in small quantities and allowed to melt in the mouth, as it does not irritate or cause the stomach to become disordered. Nutritive enemas are required in some cases and will be prescribed by the attending physician, but the general nursing in a case of typhoid fever is the main thing in the treatment. There are many complications which may arise in typhoid and the attending physician will give the proper instructions in regard to such cases, but to keep the patient quiet, control the temperature, keep the bed linens in a clean condition and give the proper diet are the chief measures for the treatment of typhoid fever. Drugs to be used in these cases must be prescribed by a physician. Keep the bowels regular by giving enemas of normal salt solution. Flushing out the colon is very valuable.

WHOOPING COUGH.

This is a contagious disease contracted oftenest by children under five and very often during the first year. It is dangerous only when there are complications which may be brought on by a continuation of the cough.

The child coughs in paroxysms, beginning with several short hacks and ending in a prolonged whooping sound from which the disease derives its name. From nine to fourteen days elapse from the time the child is exposed until it begins to cough.

Symptoms.—The first symtom closely resembles nasal catarrh with a mild cough which soon becomes spasmodic. The temperature slowly increases each day and lasts for from three to ten days.

The second stage is marked by a more violent cough which lasts from one to three weeks. This soon causes vomiting and thus weakens the patient. A child soon learns to fear the paroxysms and will run to the mother or nurse as if for help. As the severity of the cough increases, the face becomes redder and hemorrhage from the ears, eyes and occasionally from the bronchial tubes, occurs.

In mild cases there is no evidence of the disease between the paroxysms. The spasmodic stage lasts two or three weeks, in some instances, though, in mild cases there is scarcely any whoop at all.

Treatment.—Whooping cough cannot be cured by treatment or remedies, but the attack can be shortened and we can lessen the severity of the paroxysms. The disease is so common and often in such mild form that it does not receive attention enough. The patient must be kept in a warm room with the temperature as nearly uniform as possible. Keep the air moist by means of hot water. This can be done by dropping a hot brick into a wooden dish containing boiling water. Add a small piece of unslacked lime, an ounce of vinegar and a few drops of either turpentine or eucalyptus. Do not neglect this, as it will greatly decrease the paroxysms and help to make respiration easy. Above all keep the child out of doors as much as possible and see that the sleeping room is well ventilated.

A FEW OF THE COMMON AILMENTS AND THEIR TREATMENT—THE FEVER THERMOMETER.

Every mother who has the care of children should purchase a good fever thermometer from her druggist and learn how to use it. The "Manhattan," manufactured by Becton, Dickinson & Co., is one of the best made. They can be purchased for one dollar at any drug store. When shaking down the mercury in the thermometer one must be very careful that it does not strike against anything or slip from the hand. It is very easily broken

and should be handled with great care. The above mentioned thermometer is in an aluminum case and is best for home use.

In shaking down the mercury hold the thermometer by the end on which the screw cap is found and give a few hard shakes. This must be done each time after the temperature is taken and the mercury must be shaken down below the normal mark. The red arrow marks the normal temperature point and when the mercury stands at this point we say the patient's temperature is normal, which is 98 6-10 degrees.

In any case of sickness the temperature should be taken at least three times a day and in severe cases every two or three hours. This will give the fever record for the physician when he arrives and also tells the mother how the child is getting along. The temperature is usually taken by placing the end containing the mercury under the tongue and letting it remain there one minute. If for any reason it cannot be taken in the mouth, place it under the arm and let remain two minutes. In cases of children and infants it is best to take the temperature per rectum, placing the thermometer just far enough in the rectum so that the mercury is not visible. When taken this way the temperature is generally half a degree higher than that of the mouth and one degree higher than that under the arm.

CONSTIPATION.

Milk is constipating, so it is little wonder that so many bottle-fed babies are afflicted with this complaint. A larger proportion of fat is required, so cream may be added to the milk for bottle babies. From one-half to a teaspoonful of olive oil given once a day will also be found of value. Try strained prune juice and orange juice. Encourage older children to eat foods which are laxative, as graham bread, oatmeal, plenty of butter, fruit, fresh vegetables, etc.

Form regular habits with the baby at an early age. Hold it on the nursery chair after breakfast each day and it will soon learn what this is done for.

For a quick movement of the bowels the simplest and least harmful method is an enema of warm water containing a small portion of salt, one teaspoonful to the pint. Soapy water often answers the purpose of stronger remedies, the amount depending upon the age of the child. The infant's, the hard rubber, or the fountain syringe may be used. A useful injection is one-half a teaspoonful of glycerine mixed with four or five times as much water.

If the baby's bowels do not move naturally every day, see that they do before it is put to bed for the night. This may be best accomplished by using a simple warm water enema. No harm will result from this, even though

it should be used every night for some time. Do not get into the habit of giving castor oil, as it will cause constipation instead of relieving it. The following is a good formula:

Kasagra .....1 ounce
Glycerine .....1 ounce

Give the baby five or ten drops of this mixture two or three time a day and see that it has an occasional drink of boiled water.

Glycerine suppositories are also of great value, simple to use and very effective. If you haven't any of these in the house, make some little suppositories of castile soap, about two inches long and half an inch thick at the base and tapering to a point. Dip it in warm water and then insert part way into the rectum and hold there until the bowels start to move.

TREATMENT OF COLDS.

The process of taking cold affects the entire body, but most commonly manifests itself in congestion of the mucous membrane. No two children are alike in this respect. One may endure any amount of exposure with little danger of taking cold, while the other is susceptible to the slightest change. The most frequent cause of colds especially in infants is the effect of cold air upon a moist skin. Hence a child that perspires freely suffers most

in this respect, especially during the cold season. The head is too often neglected when the child is dressed for out-door exercise. The whole body is covered with warm clothing, the legs and arms are thrown about, thus creating undue perspiration, then the little head is covered only by a thin sort of material. The little lace creations and caps sold for infants' wear and so much to be admired, prove of untold injury and detriment. The child is then taken out into a cold wind and the wonder grows why he should have taken cold. Allowing a baby to sit upon the floor, and kicking off the bed covering at night are also frequent causes for cold. The temperature of the children's sleeping room should be as nearly uniform during the day and night as it is possible to have it. Many persons have the incorrect idea that the child takes cold during its bath. It is more often due to most any other cause. Either pin the bed blanket to the mattress or clothe the child in combinations with the feet and you will prevent many a cold. Nursing babies are often afflicted with what is commonly called snuffles, or a cold in the head. A drop or two of heated sweet oil rubbed over the bridge of the nose is a simple remedy and will often relieve it. Drugs are hardly more effective in treatment of a cold than are the little simple home remedies that every mother should understand, and be able to use. A good hot foot bath and plenty of hot drinks

to induce profuse perspiration should be used at the onset of the disease, especially as the child is about to retire. Great care should be exercised after this treatment to avoid all exposure from draughts, as another attack is more apt to follow. See that the bowels move once in twenty-four hours, though a good thorough physic is an excellent means of ridding the patient of a cold; give Laxol.

TONGUE TIE.

This is a condition caused by the muscles or under part of the tongue being too short and tight, thus preventing the free use of the tongue. It also interferes with nursing. This can be remedied by clipping the little cord with curved scissors. Wrap the child in a large towel so that the arms are fastened to the sides, then place it on its back in the nurse's lap or on a table and hold the head securely. Bleeding is usually so slight that it needs no consideration; this should be done by the physician.

THRUSH.

Thrush.—A disease which affects the mucous membrane in the mouth of infants. It makes its appearance in the form of small white masses about as large as the head of a pin. They form on the tongue and inside of the

cheeks, giving it the appearance of being covered with curdled milk. The growth adheres firmly and will bleed if removed forcibly. The disease is not contagious and can easily be cured in a week if directions for treatment are followed.

Treatment.—If the child is fed from the mother's breast, see that the nipples are well cleansed with a saturated solution of boric acid before and after nursing. If it is a bottle-fed infant, see that the nipples and bottle are boiled carefully after each nursing. Wash the baby's mouth with a saturated solution of potassium chlorate (potash) several times a day. To do this, wrap a piece of absorbent cotton about the index finger and wash the mouth carefully in this manner. If the child persists in refusing the bottle or breast, spoon feeding may have to be resorted to for a few days, or if the child is nursing draw the milk from the breast by means of a breast-pump and feed to the child in the same manner. If this does not give immediate relief, report the case to your physician.

WORMS.

In the great majority of cases no symptoms are present until the worms are discovered after they have passed the rectum. There are three principal species of worms to be found in children: The thread worm, the round

worm and the tape worm. Worms either produce definite symptoms or none at all. They may produce itching at the opening of the bowel, picking at the nose, disordered digestion, grinding the teeth and other indications of restlessness, and sometimes even convulsions. The thread worm closely resembles a small piece of cotton thread about one-half inch long. Absolute cleanliness is the best means of treating this, with an injection every other night for a week or two, with as much of an infusion of Quassia as the child can hold comfortably. The round worms are from four to twelve inches long and are of a reddish white color. They may be present in the bowels in large numbers. Never give worm medicine, except as prescribed by your family physician. Tape worms are occasionally found in children. The only means of recognizing its existence is the discovery of portions of it in the passages. The treatment of this disease is beyond the skill of the mother, as it is essential to remove the head to prevent the forming of another.

COLIC.

Very few children escape this disease during the first year. In most cases the child thrives in spite of the disease, while in other instances indigestion exists to such an extent that the conditions may prove most serious. The ready decomposition of milk in the intestines ex-

plains the frequency of colic in babies, although any condition that would cause indigestion may at the same time be the cause of colic. Too large a quantity of milk given is a frequent cause of colic. It may also be due to defective bowel action. Any condition which may have an irritating effect upon the child's nervous system, such as fright, excitement or anger, are very apt to produce colic. A baby often nurses this condition from an irritable, overwrought or nervous mother. Constipation in the mother is also a frequent cause.

Symptoms.—Severe pain in the abdomen usually due to gas is one of the never-failing symptoms. The child makes this understood by sudden and violent crying. The abdomen is hard and swollen; the legs and arms are alternately doubled up and straightened out and the feet usually cold. To prevent repeated attacks diminish the amount of time between the meals.

The body shold be warmly and uniformly clad, paying special attention to the covering over the abdomen and allowing no portion of the body to be without flannel covering. Good woolen stockings which will cover the knees are essential.

Treatment.—Never feed a baby during an attack of colic. The warm milk may stop the crying for a moment, but it only adds to the indigestion. Rub the abdomen for several moments and change the child's posi-

tion by lifting over your shoulder, as it may cause the gas to escape and ease the colic. A small hot water bag will also be found of use. A few drops of peppermint or brandy in a little hot sweetened water will relieve it for the time being. If these simple remedies do not relieve the child, it is beyond the mother's treatment and a physician should be consulted. Do not give paregoric, as it contains morphine.

EARACHE.

It is sometimes very difficult for a mother to recognize the symptoms of earache, especially in an infant. Sometimes the baby will raise his hand to the seat of the pain. Look carefully into both ears and see if they present a different appearance. Never drop medicine of any sort into the ear unless it is advised by the physician. Relief may be obtained by using hot water, as hot as can be borne. The proper heat can be determined by holding to the mother's cheek. Syringe the ear with a small ear syringe, then turn the child on the affected ear to allow all the water to run out. Apply dry heat to the outside by means of a hot-water bag.

TOOTHACHE.

This is generally due to a neglected cavity which should be filled as soon as possible. In the meantime the

pain is intense and can be alleviated for a time by holding a hot-water bag against the face and packing a bit of cotton wet with oil of cloves into the cavity.

Much pain and trouble can be averted by watching the teeth carefully. Have your dentist examine them every six months.

BURNS.

In case of burns the first thing to do is to apply a saturated solution of carbonate of soda. This will check the pain. Then the following solution, which is known as "Carron oil," should be applied. It is well to have a quantity of this prepared and ready for emergencies. It is composed of limewater, linseed oil, and carbolic acid in the given proportions.

Limewater	4 ounces.
Linseed oil	4 ounces.
Carbolic acid	2 drams.

Sterile gauze should be saturated in this solution and applied to the burned surface. It should be changed every six to twelve hours and kept moist.

The following five per cent. solution of picric acid is another good application for burns, and is made as follows:

Picric acid	2 drams.
Aquae	6 ounces.

This picric acid will stain everything with which it comes

in contact a bright yellow which will not come off. It is well to use rubber gloves when applying it.

NOSEBLEED.

Nosebleed occurs the most frequently and is the least dangerous of any internal hemorrhage. The small blood vessels in the mucous membrane of the nose become distended by the congested condition and the rupture takes place. It may also be due to an injury. The bleeding generally occurs in one nostril and as a rule is easily controlled, but sometimes it is persistent and endangers the life. Some form of heart or local disease of the mucous membrane may also be the cause of bleeding from the nose.

Treatment.—First find out in which nostril the hemorrhage is taking place and raise the arm on that side above the head; grasp the nose between the thumb and finger with a firm pressure, and saturate a towel with cold or ice water and lay it on the patient's forehead. If this does not control the hemorrhage a quantity of ice water may be injected into the nostril. Or, a solution composed of one tablespoonful of salt to a half tumbler of water may be injected in this way. In case of severe injury these simple remedies may not be effective and it may require special treatment, but the above suggestions will be very valuable and can be carried out while the physician is being called.

JAUNDICE IN THE NEWBORN.

Jaundice occurs in about one-third of all infants. It comes about the second or third day and continues from a week to ten days. It is nothing alarming, but be sure the intestinal tract is active. If the bowels are sluggish, give twenty drops of castor oil and repeat in twenty-four hours if necessary.

INFLAMMATION OF THE BREASTS IN THE YOUNG INFANT.

This often occurs in both the male and female. The mammary glands are swollen to several times their natural size and are extremely sensitive to the touch. They must not be pressed or manipulated in any way. Use an ointment composed of Ichthyol twenty-five per cent. in Oxide of Zinc U. S. P. Spread this on some old linen that has been carefully boiled and then place some oiled silk between that and the clothing to keep it from getting soiled. Change the dressing every six hours.

INFLAMMATION OF THE ANUS.

After a child has been suffering several days with diarrhoea, the anus and the skin surrounding it are very apt to become inflamed and sore. This causes distress when the bowels move and will eventually bring on con-

stipation, as a child will dread and try to avoid a movement. Use plenty of hot water and apply Fuller's Earth or an ointment made as follows:

Ichthyol ..... 1 dram
Ung. Aqua Rosa ..... 1 ounce

Apply the ointment freely to the parts, using old linen for the purpose. Change it every three or four hours.

TEETHING.

The lower two front teeth which are cut first make their appearance between the sixth and seventh month. It is very common for a child to begin teething as early as the fourth month. When teething is delayed it may be due to a prolonged illness during infancy. Yet in some cases perfectly healthy children have not cut their first teeth until a year old.

In healthy children teething should not cause any trouble of a serious nature. It may cause a slight fever, restlessness, and loss of appetite, but this is only temporary. If the digestion is disturbed to a marked degree, reduce the amount of food. This can be accomplished by giving a nursing baby a little water to drink before nursing, thus reducing the capacity for milk. If the baby is bottle-fed dilute the food with boiled water by removing two or three ounces of the food and adding the water.

If the gums are swollen and distended it will assist

the tooth to come through if the protruding points are rubbed with a clean towel placed over the index finger.

To remember the time that the baby or milk teeth are to occur the following key will be of value:

At six months ..... six teeth
At twelve months ..... twelve teeth
At sixteen months ..... sixteen teeth
At twenty months ..... twenty teeth

The Permanent Teeth.—The permanent set comprises thirty-two teeth, which begin to appear in about the sixth year when the temporary teeth begin to drop out. The dentition of the permanent teeth is not complete until about the twentieth year. The milk teeth should not decay, but should fall out or be forced out by the second set.

Care of a Child's Teeth.—As soon as the teeth appear they require attention. Wash out the mouth night and morning for the first two years with a solution of boracic acid. One ounce of boracic acid crystals in a pint of water makes a solution of the proper strength. Take a piece of gauze or surgical cotton, wind around the index finger, dip into the solution and gently apply to the gums and teeth. After the age of two years use a soft tooth brush and a simple tooth-powder as follows:

Precipitate of Chalk ..... one ounce
Bicarbonate of Soda ..... one dram
Oil of Wintergreen to flavor.

Have your druggist put up this powder for you.

Have the teeth examined by a dentist every six months after the child has reached the age of two years. If any cavities appear in the first teeth they should be filled with some soft filling.

CONVULSIONS.

A spasm or convulsions may be due to various causes. During the early days of life it is very serious and at no age should it be lightly regarded. A single convulsion has been known to produce a hemorrhage in the brain which resulted in destroying the child's mental faculties and at the same time caused paralysis.

In the majority of cases the convulsion is caused by some irritation in the stomach or bowels. A mother will not be able to ascertain the exact cause, but if her child should have a convulsion she should give it the following treatment and call her physician at once.

Treatment.—Undress the baby at once, place it in a hot mustard bath (temperature 105) and rub the arms and legs rapidly, using brisk friction. At the same time give an enema of warm soapy water and dilate the rectum with the finger, having first well anointed the finger with vaseline. The finger should be placed in the rectum without using any force, using the little finger if the child is very young; that is, six months or over. This method

should not be employed with a newly born child. As soon as the child can swallow give it two teaspoonfuls of castor oil. After a child has had a convulsion keep it very quiet for several hours. Apply cold cloths to the head and keep a hot water bottle at the feet. Give a very light diet composed of chicken broth, weak beef-tea, and thin gruels for a day or two while the child is in bed.

Remember, the second convulsion is more easily produced than the first and a third more easily than the second.

In most cases the above treatment will relieve the convulsive condition in a few minutes and the child will return to consciousness. Do not be nervous or lose your presence of mind, but act quickly.

Consider convulsions very serious at all times and consult a physician in regard to the cause that he may prescribe the proper treatment and prevent another attack.

BED-WETTING.

This does not demand any attention until the second year. Passing urine is an involuntary act in young children, but if persisted in in spite of good training, some measures must be taken to correct it.

Have the urine tested; if it is found to be very acid, reduce the quantity of vegetable foods in the diet. If

the trouble continues beyond the third year the child must have treatment. The trouble may be due to constipation, thread-worms in the rectum, or the diet may have a great deal to do with it. Lessen the quantity of liquid diet, especially water, during the day, giving none at all after five o'clock, and see that the bladder is entirely empty before the child retires.

HOW TO CONTROL PELVIC INFLAMMATION.

In simple cases when there is an acute congestion in the pelvis and pain in the region of the uterus and ovaries great relief may be obtained by the following method:

1. Keep perfectly quiet in bed; this is very important.

2. Keep the bowels regular by taking Epsom Salts, Citrate of Magnesia, or a Seidlitz powder in the morning, or one or two teaspoonfuls of Compound licorice powder in the evening. Repeat this as needed.

3. Take a hot douche (see Chapter XV.) night and morning.

4. Purchase at the drug store one dozen 10 per cent. Ichthyol vaginal suppositories and place one in the vagina against the cervix every second evening after taking the hot douche. In severe cases the suppository may be used every evening for a short time.

5. Place hot water bottle on the abdomen. It

should contain only a small amount of water so the weight will not increase the pain. If the abdomen is very sore and tender apply hot turpentine aplications (see Chapter XXII.).

6. For internal medicine I know of nothing better for general use in pelvic troubles than Woman's Specific No. 2. Take one teaspoonful four or five times a day.

INFLAMMATION OF THE VULVA IN YOUNG GIRLS.

This is an inflamamtion of the external genitals, causing an itching and burning sensation. It is often confused with gonorrhoea and having the discharge examined is the only sure means of determining its true origin. It is caused by low vitality, therefore anything that will build up and strengthen is advisable. Take some good tonic, live out of doors, and eat plenty of good nutritious food. Keep the parts absolutely clean by the use of warm water and good pure castile soap. Dr. Kerley gives the following prescription to use as a drying powder:

Acidi borici	25 grains.
Pulveris amyli	½ ounce.
Pulveris zinc oxide	½ ounce.

Dust the parts well with this and wear a napkin of old linen. Put the powder on often enough to keep the parts perfectly dry.

THE DRESSING OF WOUNDS.

Every household should be provided with the following articles for dressing wounds and injuries which occur so frequently among children:

Alcohol ..... 4 ounces.
Spirits of turpentine ..... 4 ounces.
One bottle antiseptic tablets ("Bernay's") to be used in making bi-chloride solution.
One-half (½) pound surgical cotton.
One (1) yard of plain sterile gauze.
One-half (½) dozen two-inch gauze bandages.
A small bottle of peroxide of hydrogen.
A dusting powder:
Resorcin, 1 dram.
Boric acid, 20 drams.

These can all be furnished by your druggist. Have them prepare the powder for you. The directions herein given can be applied to all injuries in general, such as cuts from knives, glass, dull instruments or old rusty nails. In some cases where the lacerations are very extensive it may require a few stitches. In that case summon your physician and tell him the nature of the injury and that you have all necessary dressing. This may save some time. The first thing to do in case of injury is to render the wound clean. This is done by dissolving one antiseptic tablet in a quart of water and washing the

parts thoroughly, using pledgets of cotton for sponges. Then sponge off the parts with a little alcohol. Do not let any enter the cut if it can be prevented. Now put the edges of the skin together and apply sufficient pressure to control the bleeding. Then saturate a piece of gauze with turpentine, but do not have it too wet. Place it over the wound, cover it over with a little cotton and apply the bandage. Do not use any powder. Next day when the dressing is changed, soften it up with the peroxide before removing the gauze. Wash off with the antiseptic solution and apply plain gauze. This method of dressing is all that is needed in simple cases. If pus forms keep the wound clean by using peroxide—and if there is much discharge use the dusting powder freely before applying the gauze. If the parts look red, become swollen, painful and inflamed, saturate a piece of gauze with the following mixture:

Carbolic acid	½ ounce.
Alcohol	2 ounces.
Saturated solution boric acid	6 ounces.

Apply locally as directed. Then apply hot applications on top of this dressing and change them often. If improvement does not occur in a very short time call your physician.

In ordinary cases once a day is often enough to change a dressing. The indications for changing a dressing are pain, soiled dressing, or fever.

In case of injury with rusty nails or anything of that sort use turpentine freely.

Keep the antiseptic tablets where they cannot be handled by children as they are poison.

Before a mother dresses any injury she should be sure to cleanse her hands by first scrubbing them thoroughly with soap and water and then rinse them well with alcohol. This is best done by having someone pour the alcohol over the hands.

BEE STINGS.

Aquae ammonia may be used with good results for bee stings or insect bites, etc. Aplpy it on a little absorbent cotton or soft muslin. It may be renewed in a few minutes after the evaporation of the first application has taken place.

BED SORES.

A bed sore is the destruction of the skin upon any part of the body which is constantly in contact with the bed, where one is so confined for a great length of time. It is caused by the great pressure on the skin and usually occurs on the back and hips.

To prevent these sores it is first necessary to keep the parts clean and keep the sheets free from wrinkles. Two teaspoonfuls of salt in a pint of whiskey is recommended

as an excellent wash in places where the skin begins to look red. If the skin is broken the most careful attention is necessary to prevent extensive sloughs of the tissue. The sore must be protected from all pressure and this is best accomplished by using a rubber ring which is inflated with air. Either this ring or pillows must be placed above and below the sore so that it will not touch the bed.

The best remedy for bed-sore after the skin is broken is Campho-Phenique. It should be applied on antiseptic gauze and covered with oiled silk. This application should be held in place by a bandage when it is possible to apply it.

If the reader should have charge of a case in which the patient will be confined to the bed for some time, the above preventive measures should be used. As soon as a slight redness of the skin is observed the parts should be rubbed with alcohol. Glycerine should be applied carefully once or twice a day as the case demands.

PRICKLY HEAT.

Nearly every infant suffers from prickly heat during the summer. It makes its appearance on the head, neck, and shoulders, and is caused by heat. Most babies are dressed too warmly at all seasons of the year.

Treatment.—Avoid putting flannels next to the skin,

as they are irritating in the extreme. Nothing gives such immediate relief as the bath of cool water. A soda bath will be found of great value. A tablespoonful of bicarbonate of soda should be added to each half gallon of water used. Have the water of the temperature to which the child has been accustomed and do not let the bath last longer than from two to four minutes. Dry with a soft cloth and with as little rubbing as possible.

One cupful of bran mixed with the water in the bath will also be found of value. One-half cupful of laundry starch used in the same manner is good.

HEAD LICE.

Children from even the best homes are apt to contract this trouble at any time during school days. The best means of eradicating it is to cut the hair short if the child is a boy. If a girl, you need not necessarily sacrifice the hair, though it will require more time to effect a cure. Dr. Kerley gives the following formula to be used as a wash:

Acidi Acetici	2 drams.
Aetheris Sulphurici	3 ounces.
Tr. Delphinii	4 ounces.
Spirits Vini Rectificate	4 ounces.

This will kill the bugs and loosen the nits so they can be combed off.

ITCH.

This is a contagious disease of the skin and is caused by a very small insect which burrows in the skin. In some cases it is very severe; in others it takes a milder form. The treatment, however, is about the same in all cases. Give a bath at bedtime in water at a temperature of 105 to 110 degrees. Use yellow laundry soap and scrub vigorously with a rough towel or bath brush. Then dry, still rubbing vigorously, and apply an ointment consisting of sulphur U. S. P. Have your druggist put it up for you. Repeat the process every forty-eight hours. Three or four treatments should do the work. If the ointment proves too irritating for the child's skin, as it may, reduce it one-half with vaseline. All clothing worn at time of the disease should be destroyed or at least boiled before wearing again.

ERUPTIONS ON THE SKIN.

There are two classes of eruptions on the skin. Those when there is fever and another class without fever. When fever exists there is acute infection present like scarlet fever, measles, etc. When an eruption occurs and no fever it is due to some skin disease, or indigestible food in the stomach, or the administration of drugs.

HIVES.

This disease is characterized by the appearance of ridges or elevations of the skin. These vary in size and shape and are such as might be caused by the lash of a whip. It causes intense itching and burning, and usually arises from internal sources, but may be caused by irritating clothing, biting of an insect, or some poisonous plant with which the patient has come in contact.

The use of certain drugs such as quinine, arsenic, etc., has often caused hives. Also certain foods have been known to have a like effect: strawberries, buckwheat cakes, tomatoes, and sausages, for instance. If the cause cannot be attributed to the clothing or some insect it is safe to conclude that there is some disorder in the intestinal canal. Give a good dose of castor oil, two to four teaspoonfuls, or a small dose of calomel followed by a good physic the next morning. Reduce the diet temporarily. Powder the skin with camphor and zinc or apply a solution composed of equal parts of vinegar and water to the skin with some absorbent cotton. One of the simplest and most effective remedies, however, is a good soda bath, using a teacupful of common soda to two or three gallons of water.

ECZEMA.

This disease, like hives, may arise from causes operating within, or from an irritating influence from with-

out. The appearance of the skin changes very suddenly. It may be clear one day and the rash may appear the next day.

Children under a year old are most liable to this disease. In nursing babies it may be found only in one round spot on each cheek, though, in rare instances, it may cover a large portion of the body.

The principal causes are an inherited tendency, a run-down constitution, over-feeding or some digestive disturbance, the use of some soap that irritates, or possibly contact with soiled diapers, etc. Usually the skin is a bright red covered with little watery pimples. These soon rupture and leave the skin swollen and red. The greatest discomfort is suffered from the almost unbearable itching. Put the hands in mittens to prevent scratching. Give a laxative and lessen the diet. Do not use soap at all and no more water on the diseased parts than is absolutely necessary. When there is irritation in folds of the flesh, place a layer of cotton in the crease to prevent friction.

Dust the parts with equal quantities of subnitrate of bismuth and oxide of zinc made into a fine powder. Remove the crusts by means of sweet oil.

RUPTURE.

This is often caused by whooping cough or colic and occurs most frequently in boys. It may also be occasioned

by constipation. Operating on infants under five years of age is not advisable. A truss carefully fitted is the best means of control. Never leave the truss off any longer than is absolutely necessary to cleanse it. One descent of the hernia means the undoing of several weeks of vigilant care. The truss must be worn night and day. If it does not fit comfortably, it should be reajusted until it causes no irritation. A piece of cotton placed between the child and the hard rubber bulb will add to the comfort of the child. It should be worn for a year after the last descent of the hernia. Have it changed as the child grows.

Umbilical or navel hernia occurs in infants and is usually caused by whooping cough. In size it varies from one-fourth to one inch in diameter. It nearly always makes its appearance during the first few months of a baby's life.

The treatment is simple. Bring the skin from each side together, thus forming a sort of splint on each side and place over it a strip of adhesive plaster from one to two inches wide. This should be changed every four or five days. If the skin becomes irritated and red, change the folds at right angles with the old ones. This gives relief for a time. It does not take longer than six months at the most to effect a cure.

HOW TO BREAK UP A COLD.

The following will be found very effective for breaking up a cold. This should not be given to a child:

Asperin ..... ½ drams.
Codeine sulphate ..... 3 grains. ....
Powders No. 6—One powder at seven and nine each evening.

Take a hot lemonade containing a little whiskey at bedtime. Each morning take a dose of Epsom salts or a bottle of Citrate of Magnesia. A good hot foot bath in the evening will also assist in bringing about the desired effect.

This is for a case where there are aches and pains, some headache, and a general miserable feeling.

HEADACHE IN CHILDREN.

This is unusual and indicates that there is disturbance somewhere that is causing it. Possibly the eyes need attention, or it may be the first symptoms of some disease which is being ushered in by a headache. Over-study at school, undue exercise, or excitement may bring on a headache.

Treatment.—First determine the cause if possible. If from the eyes, have them fitted with glasses at once; if from intestinal derangement, move the bowels freely. Examine the urine and watch the diet.

HOW TO TAKE CASTOR OIL.

According to Carleton the best way to give castor oil is as follows:

Vanillini	1¾	gr.
Olei Menth. pip	5	m.
Saccharini	8	gr.
Alcoholis.	2	dr.
Tinct. persionis	20	m.
Olei ricini, q.s.ad.	6	oz.

Dissolve the vanillini, oil of peppermint, and saccharini, in the alcohol. Add the persionis to the oil and shake thoroughly, then unite the two mixtures. The dose is the same as plain castor oil.

In the treatment of children nothing seems to take the place of castor oil as an easy and effective method of emptying the alimentary canal. However, most children are opposed to the unpleasant taste of castor oil. The above mixture is pleasant to take.

There is also a preparation of castor oil on the market which is known as Laxol. This is very agreeable to the taste and is simply castor oil in disguise.

A GOOD PRESCRIPTION FOR CHRONIC CONSTIPATION WHEN ASSOCIATED WITH STOMACH TROUBLE.

This may be taken when there is no other symptom besides constipation. It will also give great relief when

there is indigestion and loss of appetite, a condition that is very common in women.

Tincture Nux Vomica ..... 3 drams.
Pepso Laxatone ..... 4 ounces.

Directions.—Take one or two teaspoonfuls half an hour before meals and at bed time.

Copy this prescription and the directions and take to your druggist to be filled.

Read the chapter on chronic constipation.

GOOD COUGH REMEDY.

When there is a dry irritating cough located in the throat and no other symptoms are present, the following is of value:

Equal parts—
Honey.
Glycerine.
Lemon juice.
Whiskey.

Take one teaspoonful of the mixture every hour.

A GOOD GARGLE.

A good gargle which can be used freely for sore throat is as follows:

Equal parts of
Listerine
Peroxide
Water.

WHOOPING COUGH.

The following is highly recommended by Dr. Fischer and can be given in a case of whooping cough that is being treated without the aid of a physician:

Bromoform (Merck) ..... 1 dram
Tinct. Cardamom Comp. ..... 1 dram

Give five drops in water three times a day to a child one year old. Add one drop for every two years, thus:

Six drops for a baby three years old.

Seven drops for a baby five years old.

DIARRHOEA AND VOMITING IN CHILDREN.

Ofttimes during the summer months children are taken with an acute attack of vomiting and diarrhoea. After the bowels have been thoroughly cleaned out with castor oil it can be controlled by

Hyg. Chloridi Mit. Aromatic 1-10 grain. .....tablets No. 4
Intestinal Antiseptic .....gr. 10
Peptenzine .....gr. 15
Bismuth Subnitrate .....gr. 15
M. ft. chart. No. 15.

Give one powder every two hours, which is the regular dose for a child one year old. Increase or decrease dose according to age.

INFANT'S ANODYNE.

If baby is restless from any cause, has colic or any of the infectious diseases which cause a nervous condition, or if teething is causing much pain, give Infant's Anodyne,—one pill dissolved in a teaspoonful of water every half hour until quiet. Infant's Anodyne contains

Nickel bromide	gr. 1/134
Codeine sulphate	gr. 1/67
Powdered ipecac	gr. 1/134
Lithium carbonate	gr. 1/25
Oil of anise	m. 1/134

Saccharin, q. s.

Dose:—One pill every half hour for infants; more for older children. They can be obtained from any druggist.

DIARRHOEA MIXTURE FOR ADULTS.

Tr. Opii camphortae	ounces 1
Tr. Kramariae	ounces 1
Misturae cretae	ounces 2

Dose:—Two teaspoonfuls four times a day, or, if necessary, it may be given every three hours.

An ounce of castor oil should first be taken to clean out the bowels. Stop all food until the condition is relieved. Keep perfectly quiet in bed and if there is any pain apply hot applications to the abdomen.

FOR DIPHTHERITIC SORE THROAT.

Mentholis .....drams 2
Toluoli .....drams 9
Liquoris ferri. chloridi .....ounces 1
Alcoholis .....ounces 2

Apply to the mucous membrane on a cotton swab at frequent intervals.

A GOOD TONIC.

When it is necessary to give a general tonic the following will be found of value:

Elixir Iron, Quinine, and Strychnia.....ounces 3
Elixir Lacto Peptine.....ounces 1

Dose:—One teaspoonful before meals and at bedtime.

RHEUMATISM.

Every one has a different remedy for rheumatism, but the only line of treatment is that of elimination; that is, keep the skin, kidneys, and bowels in good condition that they may throw off the poison. The following treatment is good for this purpose:

Calcalith tablets—One every four hours with hot water.

Salithia—One teaspoonful in half a glass of water several times a day for an adult.

HOME MEDICINE CHEST.

Every mother should provide herself with the following dressings and drugs to be kept in her medicine chest for cases of emergency:

Dressings—
Surgical cotton
Plain gauze
Bandages
Bi-chloride tablets
Lysol (for antiseptic wash one teaspoonful to quart)
Alcohol
Oil of cloves
Whiskey
Quinine 2 grs. capsules.

Headache tablets. The following is a good formula and is made by several drug firms. It can be obtained from any drug store, but should not be given to children.

Acetanilid	grs.	3½
Sodium Bromide	grs.	1-10
Sodium Bicarb	grs.	9-10
Caffeine	grs.	¼
Codeine Sulphate	grs.	¼

Dose: One or two tablets every one to three hours as needed for headache.

Antiseptic soap (Carbenzol is a good make)

A good salve (nothing is better than Carbenzol ointment)
Mustard plasters
Castor oil or Laxol
Epsom salts.
Spirits of Camphor.
Turpentine.

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ERRATA

Fig. 75—Should read: Showing a leuchorrhoeal discharge from the cervix (modified from Massey's Gynecology, copyright F. A. Davis Company).

Fig. 73—Should read: Showing the discharge from a uterus which is infected with gonorrhoea (modified form Massey's Gynecology, copyright F. A. Davis Company).

"Golden Rules," pages 299, 300, 301 and 302, were culled from various sources.

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